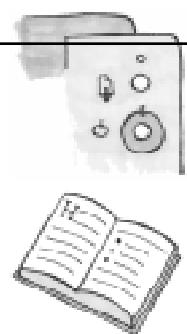
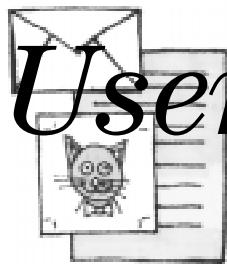




HP DeskJet 670C Series Printer



User's Guide

Manual Part Number
C5884-90126

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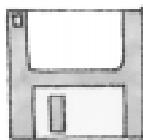


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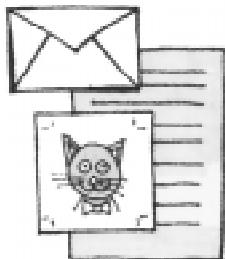
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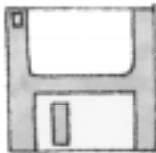
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USING THE HP PRINTER SOFTWARE

Windows Users — The printer software for Windows explained in this section of the User's Guide provides complete printer control for use with programs designed for the Windows 95 and Windows 3.1x operating systems. When you install the printer software for Windows as described in *First Time Setup section* of this User's Guide, all necessary printer software is installed for your use.

In order to use all of the features of your HP DeskJet 670C Series printer, make sure it is selected as the default printer in your Windows operating system. Because most software programs supersede the settings in the Windows operating system, be sure to also select the HP DeskJet 670C Series printer as the default printer from within your software programs. To set the default printer:

- For Windows 95, from the taskbar select **Start**, then select **Settings**, then select **Printers**. Then double-click the **HP DeskJet 670C Series** printer icon to open the queuing dialog for the HP DeskJet 670C Series printer. Click **Printer** on the menu bar and click to select **Set As Default**.
- For Windows 3.1x, open the Window's **Control Panel**, which is usually located in the **Main** program group. Double-click the **Printers** icon and set the **HP DeskJet 670C Series** printer as the default.

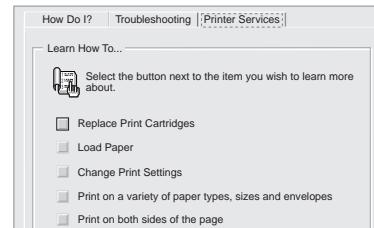
DOS Users — See the appendix, *Printing from DOS*, for specific information on printing from your DOS software programs.

How Printing Works

1. You lay out the page and choose the text, pictures, fonts, and colors from your software program (such as a word processor or drawing program).
2. Select settings such as paper type, paper size, orientation, and print quality in the HP print settings box (see page 20).



3. Check your printing status, and get help on how to print and how to solve your printing problems in the HP Toolbox (see page 52).



4. Your software program and the printer software send information to the printer, where it is translated into dots of ink on the page.
5. The printer sends information about printing progress and any errors to the computer, which displays messages on your screen.

6. The printer picks up the top sheet from the stack in the lower (IN) tray, prints on it, passes it to the upper (OUT) tray, then picks up the next top sheet from the stack in the IN tray.
7. Your printer will print at different speeds, depending on the complexity of the job and the print quality you have chosen. If you have a lot of graphics, it'll take longer to print, and color printing takes longer than black and white.

About Fonts

With your HP DeskJet 670C Series printer, you can print TrueType fonts provided with other software programs or, when using Adobe Type Manager, you can also print Type 1 fonts.

Opening the HP Print Settings Box

To open the HP print settings box:

- Click **File**, then click **Printer Setup** or **Print Setup**. On the dialog that appears next click either **Setup** or **Options**.
- Or, click **File** and (if **Print(er) Setup** isn't listed) click **Print**. Then click **Properties** or **Setup**. (In this situation, clicking **Options** won't get you to the HP print settings box.) If you still don't see the box, click **Setup**, **Options**, or **Properties**.

Select the appropriate settings.
Choose the right paper size and type for the job.

Print clearly.
Align your black and color cartridges, and clean them when necessary.

Save time and color ink.
Click here to print drafts of color documents in shades of gray.

Save money and trees.
Print on both sides of the paper.

Fine-tune your printing.
Pick options to create the effect you want.

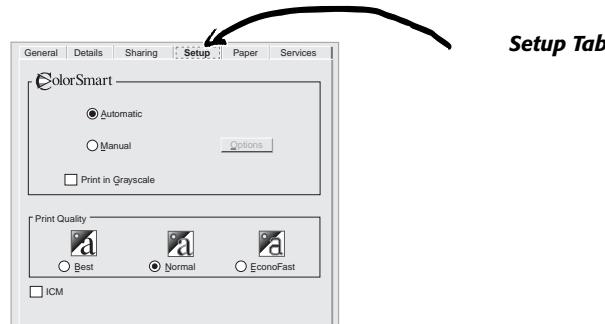
Show your finished work at its best.
Click *Best* print quality.

How to Print

1. Check your print settings.

Choose your print settings in the HP print settings box.

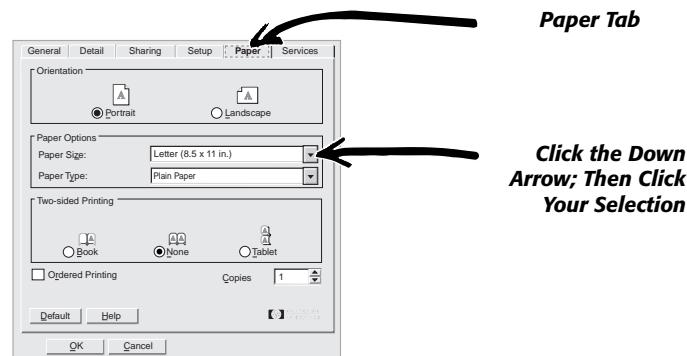
Choose color options and the print quality on the Setup tab.



NOTE

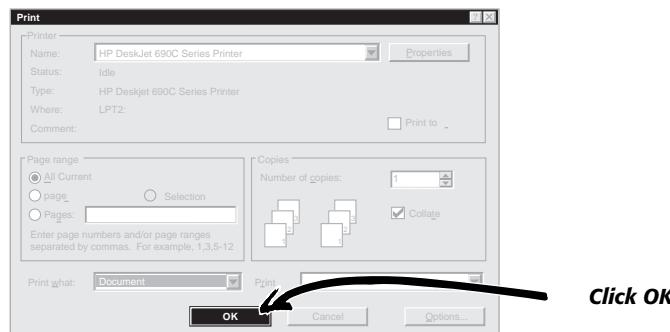
Depending upon the operating system running on your computer, your boxes may differ from the Windows 95 boxes shown here.

Choose paper size, paper type, orientation, and two-sided printing options on the Paper tab.



2. Click **OK** in the Print box of your software program to start printing.

You might need to click **File** and then click **Print** to reach the Print box.



That's all there is to it. The printer will print one page at a time until it finishes, delivering each printed page neatly into the printer's upper (OUT) tray.

While You're Printing

It takes a few moments for the printing to start, while the printer gets information from the computer. During printing, the printer might pause occasionally to receive more information. (Don't worry, it's normal.)

If You Run Out of Paper Before You're Finished

The printer will prompt you to add more paper. Put the paper in the lower (IN) tray, and press the resume  button.

Checking Printing Progress

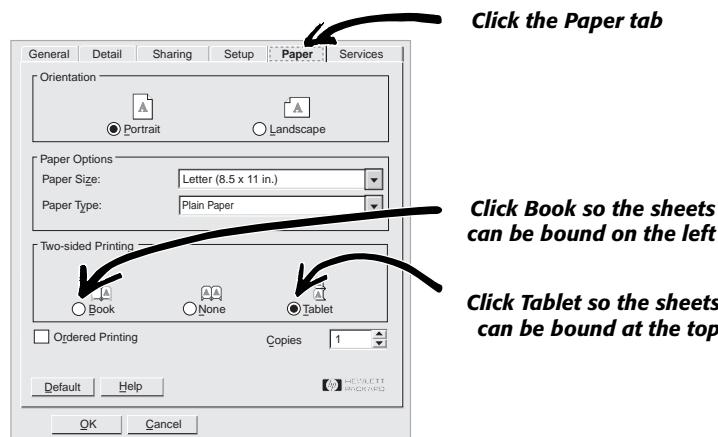
Double-click the **HP Toolbox** icon, which appears at the bottom of the screen in the taskbar (Windows 95) or on the desktop (Windows 3.1) every time you start a print job. See "Where's the HP Toolbox?" on page 52.

The Printer Services tab on the HP Toolbox tells you which page is printing.

How to Print on Both Sides of the Paper

The easiest way to save paper is to print on both sides of it. Just put the paper through the printer twice: The first time through it prints the odd-numbered pages and the second time through it prints the even.

1. Put the paper in the lower (IN) tray.
Make sure there's no paper in the upper (OUT) tray.
2. In the HP print settings box, click the Paper tab, and click **Plain Paper** as the paper type.
3. Then click **Book** or **Tablet**.



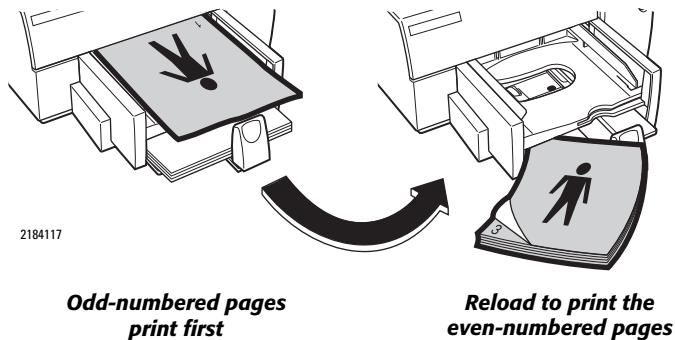
4. Print your document.

The printer automatically prints only the odd-numbered pages.

SECTION ONE

5. Put the printed pages back in the lower (IN) tray of the printer.

A message on the screen tells you how to put the printed pages back in the printer. The following illustration shows how to put the paper back in the printer for portrait orientation and the **Book** option.

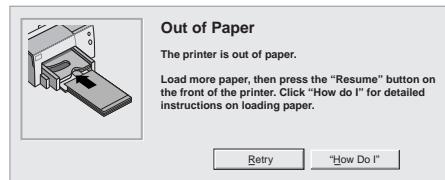


6. When the paper is ready, click **Continue**.

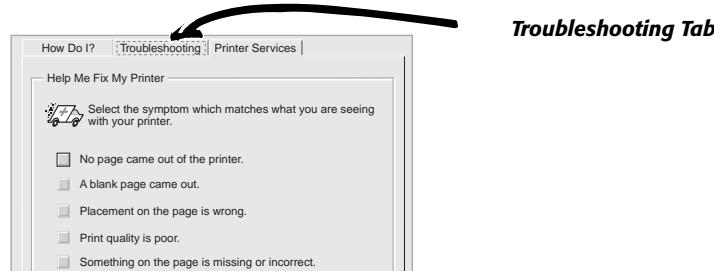
If Something Goes Wrong During Printing

Sometimes, in spite of your best efforts, something goes wrong during printing. Maybe a paper jams in the printer or nothing happens at all.

- If the printer detects that something is wrong, it displays a message on your screen. Respond appropriately to the content of the message on your screen.



- If you notice that something is wrong, click the Troubleshooting tab in the HP Toolbox and follow the instructions on the screen.



- For some specific details about printing problems and how to solve them, see *Section 4, If You Have a Printing Problem*, in this User's Guide.

About Printing in Color

Your HP DeskJet 670C Series printer prints in color when a color-capable software program is used with the printing software. Your printer is especially smart about printing color. (That's why HP called the technology ColorSmart™!) When you print a document in color, the printer marks each element in your document — text and graphics (such as pie charts with solid blocks of color) — and renders each at its vivid best.

To print in color, be sure you have created colored text or pictures within your document, then turn on color printing in your software program. Color printing is typically turned on in your software program's Print box. By default, the printer software is set for color printing; however, you can print drafts of your color documents in grayscale if you want to save time and ink.

How to Turn Off Color

To economize on the use of the color print cartridge, print draft copies of your color documents in grayscale. Grayscale printing is significantly faster than color printing, and it gives you a good approximation of your final output. To print in grayscale:

In the HP print settings box (see page 20), click the Setup tab, then click **Print in Grayscale**.

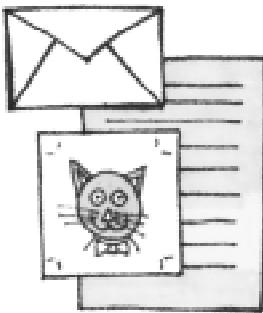


Print in Grayscale

An "X" means that color is turned off

Updating the Printer Software

HP periodically provides updates of the printer software. These updates may include enhancements that improve the performance of your printer. See *Contacting Customer Support* on page 61 for how to obtain updated printer software.

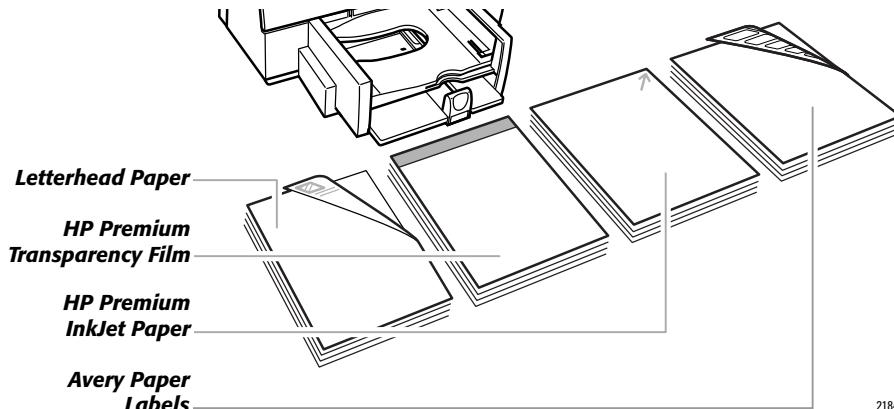


USING PAPER, CARDS, ENVELOPES, TRANSPARENCIES, AND LABELS

Determining the Print Side of Paper

Be sure to insert all paper, transparencies, cards, envelopes, and Avery paper labels *print side down* into the IN tray of the printer. For plain paper, the print side is identified by a symbol or word on the packaging.

- For letterhead paper, *load the letterhead side down and forward.*
- For HP Premium Transparency Film, *load the rough side down with the adhesive strip forward.*
- For HP Premium InkJet Paper, *load the print side down with the corner arrow pointed forward.*
- For HP Premium Glossy Paper, *load the glossy side down.*
- For Avery Paper Labels, *load the label side down.*



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NOTE

Be sure the settings in the software match the type of paper loaded in your printer.

Guidelines for Using Paper

- To obtain the best print quality and to avoid getting paper jammed in the paper feed rollers of the printer, always use paper, envelopes, index cards, postcards, Avery paper labels, and transparency film that conform in weight, type, and size with those listed in the *Specifications* on page 70.
- Load only one type of paper, envelope, or transparency at a time in the IN tray, making sure the right edge of the stack is aligned with the right edge of the IN tray.
- When using index cards or postcards, make sure the right edge of the card stack is aligned with the left side of the raised card guide.
- Never load more than $\frac{1}{2}$ inch (1 cm) of paper or transparencies, $\frac{1}{4}$ inch ($\frac{1}{2}$ cm) of cards or Avery paper labels, or 20 envelopes into the IN tray at one time.
- Always load index cards and postcards where the paper is longer than wide when placed in the IN tray.
- When using the single envelope slot, always lower the card guide in the IN tray, be sure that paper is loaded in the IN tray, and be sure to push the envelope all the way into the slot.
- Only use Avery paper labels that are specifically designed for use with HP InkJet printers. Do not use plastic or clear labels.
- Always use software settings that match the type and size of the paper, envelopes, transparencies, or cards in the printer.
- Some types of paper, such as transparencies, glossy paper, and coated cards, need longer drying times. The printer software automatically provides the appropriate drying time for each printed page based on the paper type, print quality, and inks printed. To eliminate this drying time, select either the **HP Transparency (Pause Control)** or the **HP Glossy Paper (Pause Control)** paper type. You can then remove the printed page from the OUT tray, set it aside to dry, and continue printing.

Selecting and Storing Paper, Envelopes, Cards, Labels, and Transparencies

NOTE

Always use paper, envelopes, index cards, post cards, and other paper stock that conforms in weight, type, and size with that listed in the *Specifications* on page 70.

Selecting Paper

The HP DeskJet 670C Series printer prints on plain paper, HP Premium Glossy Paper, HP Premium InkJet Paper, and HP Premium Transparency Film. Most bond paper yields excellent printing results and is appropriate for your letterhead stationery.

Use these guidelines to select paper:

- Most papers have a side conditioned for printing and a side not conditioned for printing. Before you purchase large quantities of a paper, print on both sides of a few sheets of the paper to determine if it produces acceptable quality printing on its "print" side.
- Be sure that your paper does not have tears, dust, wrinkles, or curled or bent edges.
- Only load one type, size, and weight of paper in the printer at one time.
- For color printing, most bond paper produces good results. However, choose HP Premium InkJet Paper or HP Premium Glossy Paper to produce intense, high quality color results.

Selecting Envelopes

- Print on a few envelopes before you purchase large quantities.
- Use high-quality envelopes that are thin and sharply creased.
- Do not use envelopes with thick or crooked edges, or envelopes that are damaged, curled, wrinkled, or irregularly shaped.
- Do not use envelopes that are shiny or embossed, or envelopes with clasps or windows.

Selecting Transparencies, Labels, and Other Paper

- To achieve best color print quality, use only the recommended HP Premium Transparency film for printing transparency slides. This transparency film was designed specifically for use with your printer.
- Only use Avery paper labels that are specifically designed for use with HP InkJet printers.
- Do not use plastic or clear labels. The ink formulated for use with this printer does not dry when used with plastic or clear labels.
- Do not use paper or Avery paper labels that are damaged, folded, curled, or wrinkled.
- Do not use Avery paper labels that are over two years old.
- Do not print on partially used sheets of Avery paper labels.
- Do not use paper with cutouts or perforations, except HP approved Avery paper labels.
- Do not use multiple-part forms.
- Do not use paper that is heavily textured or embossed.

Storing Paper, Envelopes, Cards, Labels, and Transparencies

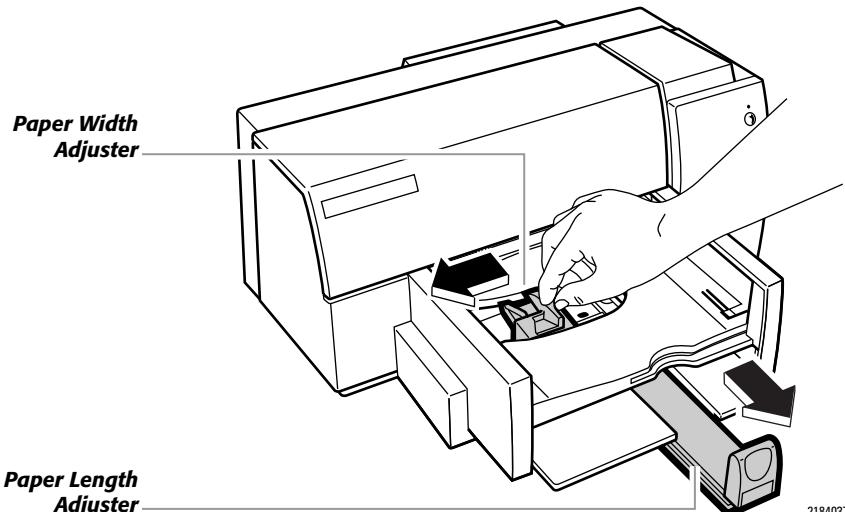
Store your paper in its packaging until you use it. Protect the paper from temperature and humidity extremes by wrapping it tightly in plastic.

Always store Avery paper labels flat in the original package to avoid wrinkling or bending.

Using Standard Size Paper

Use this procedure to print on standard size paper or transparency film with your HP DeskJet 670C Series printer. Paper and transparency sizes that are considered *standard* are: U.S. Letter (8.5 x 11 inches) and U.S. Legal (8.5 x 14 inches).

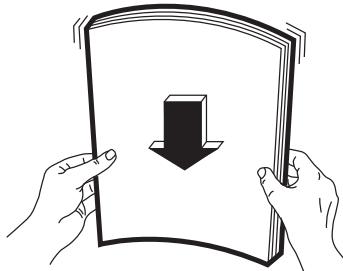
1. Slide the paper width adjuster to its leftmost position.
2. Pull out the paper length adjuster.



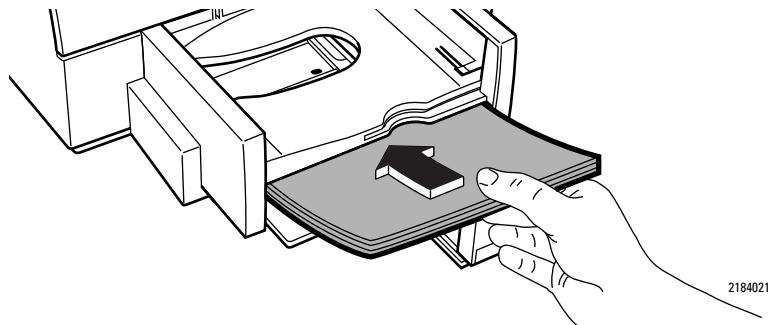
NOTE

Make sure the card guide (used when printing on index cards and postcards) is in the down position. (See the drawing on page 36 in the procedure *Using Index Cards and Postcards* for the location of the card guide.)

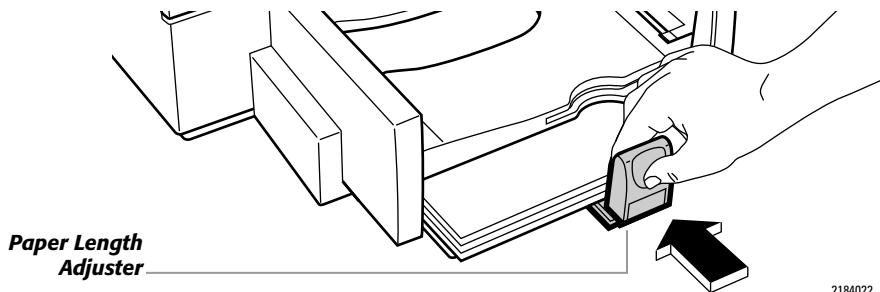
3. Remove up to approximately $1\frac{1}{2}$ inch (1 cm) stack of paper from the packaging. Fan the edges of the paper stack to separate the pages. Then tap the short edge of the stack on a flat surface to even the stack.



4. Insert the paper evenly into the IN tray, print side down, until it stops. Align the right edge of the stack with the right edge of the IN tray.



5. Push the paper length adjuster in toward the paper until it stops.



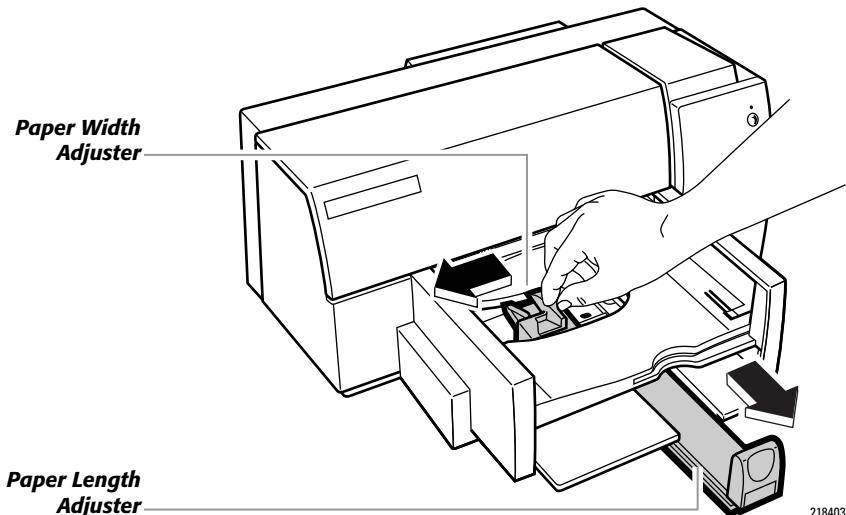
Make sure the paper does not bend in the IN tray.

6. Set the software to print on the size and type of paper now in the printer.

Using Non-Standard Size Paper

Use this procedure to print on non-standard size papers with your HP DeskJet 670C Series printer. Paper sizes that are considered *non-standard* are those with a width between 5 and 8.5 inches (127 and 215 mm) and a length between 5.83 and 14 inches (148 and 356 mm).

1. Slide the paper width adjuster to its leftmost position.
2. Pull out the paper length adjuster and remove any paper from the IN tray.



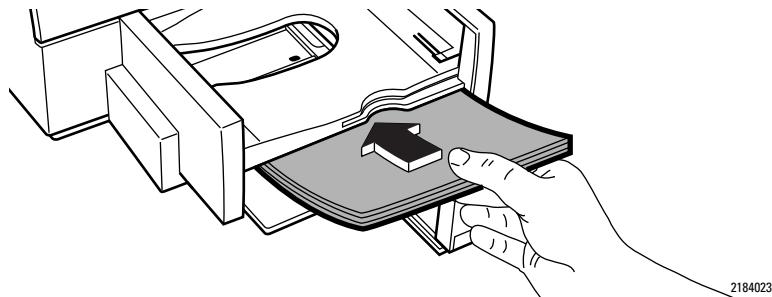
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NOTE

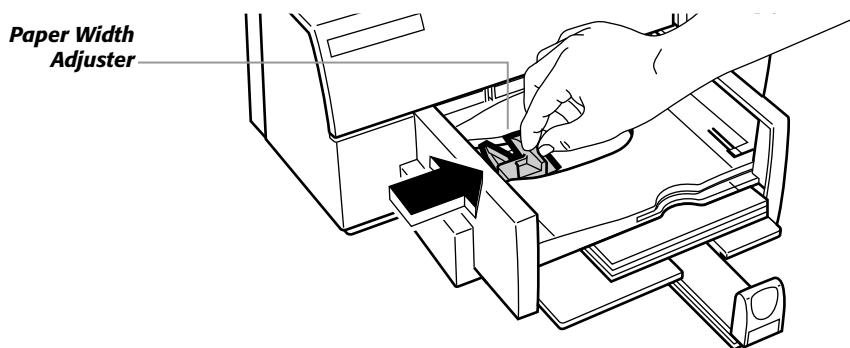
Make sure the card guide (used when printing on index cards and postcards) is in the down position. (See the drawing on page 36 in the procedure *Using Index Cards and Postcards* for the location of the card guide.)

3. Remove up to a $1/2$ inch (1 cm) stack of paper from its package and tap the short edge of the stack on a flat surface to even the stack.
4. Insert the non-standard size paper evenly into the IN tray, print side down, until it stops.

5. Align the right edge of the paper stack with the right side of the IN tray.



6. Slide the paper width adjuster to the right until it aligns with the left edge of the paper stack.

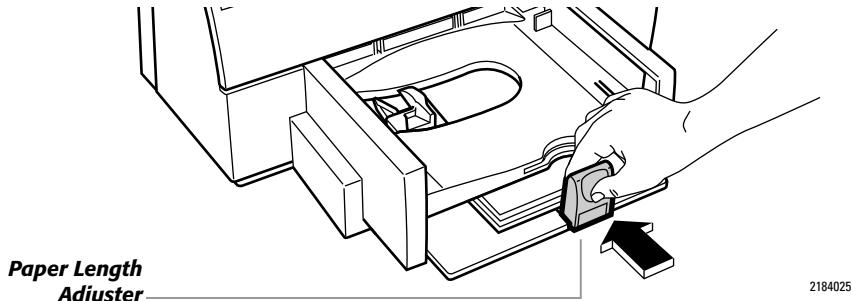


Make sure the paper does not bend in the IN tray.

NOTE

When the paper is shorter in length than approximately $8\frac{2}{3}$ inches (22 cm), release the handle of the paper length adjuster as shown on page 36 before you push in the paper length adjuster. Lowering the paper length adjuster handle reduces the paper capacity of the IN tray to a maximum stack height of $\frac{5}{16}$ inch (0.8 cm).

7. Push the paper length adjuster in toward the paper until it stops.



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Make sure the paper does not bend in the IN tray.

8. Set the software to print on the size and orientation of the paper now in the printer.

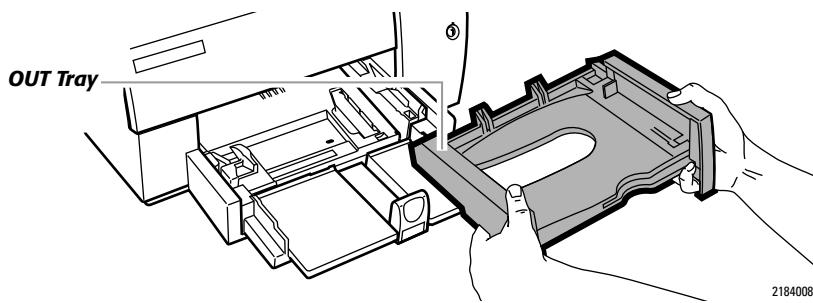
NOTE

Be sure that the page orientation set in the software matches the orientation in which you placed the paper into the IN tray. If they do not match, the printer might print off the end of the paper.

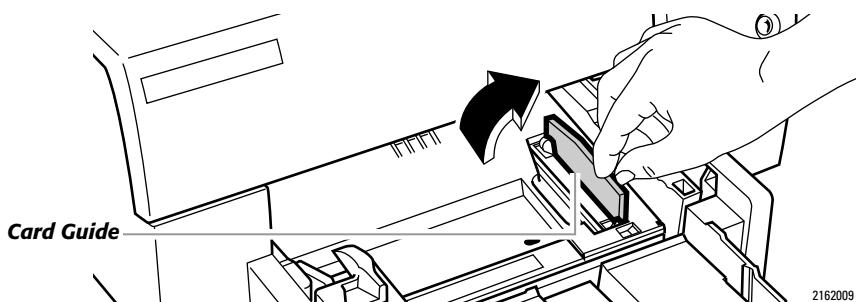
Using Index Cards and Postcards

Use this procedure to print on index cards or postcards with your HP DeskJet 670C Series printer. Make sure the index cards or postcards that you use with your printer conform in size and weight to those listed in the *Specifications* on page 70.

1. Remove the OUT tray.

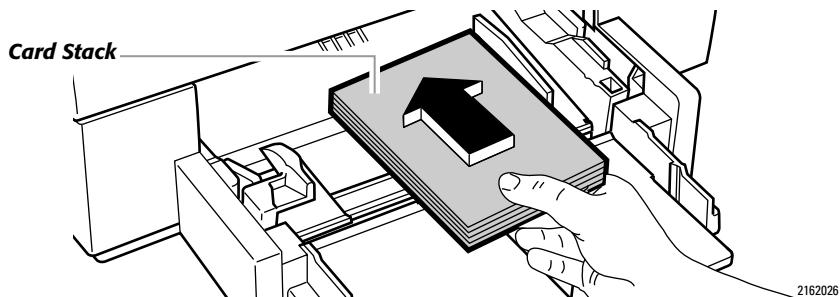


2. Raise the card guide.



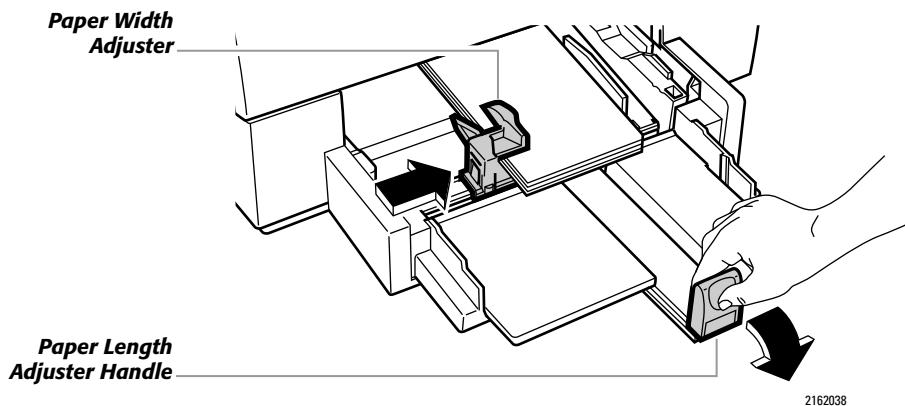
3. Remove up to a $\frac{1}{4}$ inch ($1\frac{1}{2}$ cm) stack of cards from their packaging and tap the short edge of the stack on a flat surface to even the stack.

4. Insert the cards into the IN tray. Align the right edge of the card stack with the card guide.

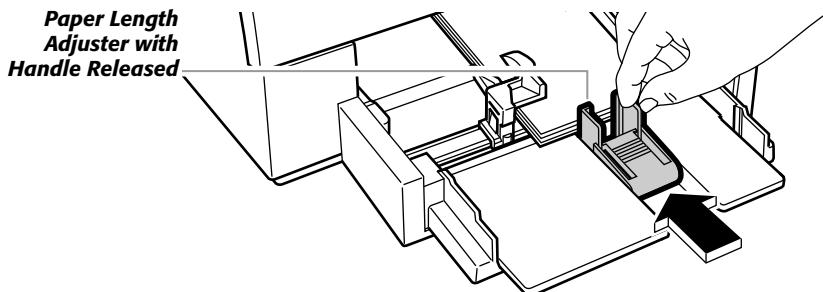


5. Slide the paper width adjuster to the right until it aligns with the left edge of the card stack.

6. Press the inside of the paper length adjuster handle to release and lower it.



7. Push the paper length adjuster in toward the card stack until it stops.



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8. Replace the OUT tray. If you encounter difficulty replacing the OUT tray, lift the top cover, wait a few moments for the print cartridge cradles to move to the center position, replace the OUT tray, then lower the top cover.

Make sure the cards do not bend in the IN tray.

9. Set the software to print on the size and type of cards now in the printer.

Using Envelopes

The HP DeskJet 670C Series printer allows you to load up to 20 envelopes at a time in the IN tray or to feed a single envelope through the printer (without first removing the paper from the IN tray) by using the single envelope slot. When using the single envelope slot, you can alternate printing on an envelope then on a piece of paper. This feature is useful when printing a series of letters and their corresponding envelopes.

NOTE

Using loosely creased or thick envelopes reduces the capacity of the IN tray. Because of these variations in envelope styles, the IN tray might accommodate less than 20 envelopes.

Always use envelopes that conform in weight, type, and size with those listed in the *Specifications* on page 70.

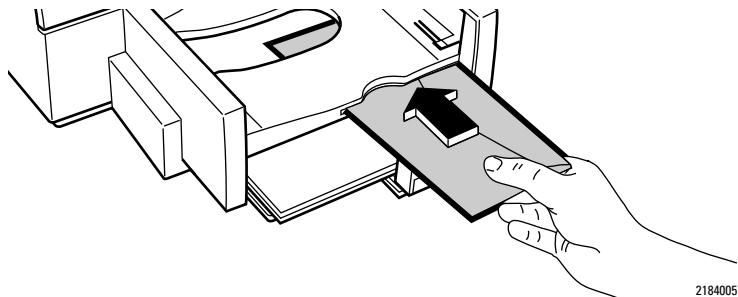
Using the Single Envelope Slot

The single envelope slot allows you to print on either a No. 10 or a DL size envelope. Other envelope sizes are not supported with the single envelope slot.

NOTE

Do not remove the paper from the IN tray, and be sure the card guide is in the down position, before using the single envelope slot.

1. Remove a No. 10 or a DL size envelope from its packaging.
2. Slide the envelope evenly into the single envelope slot, address side down (flap side up).

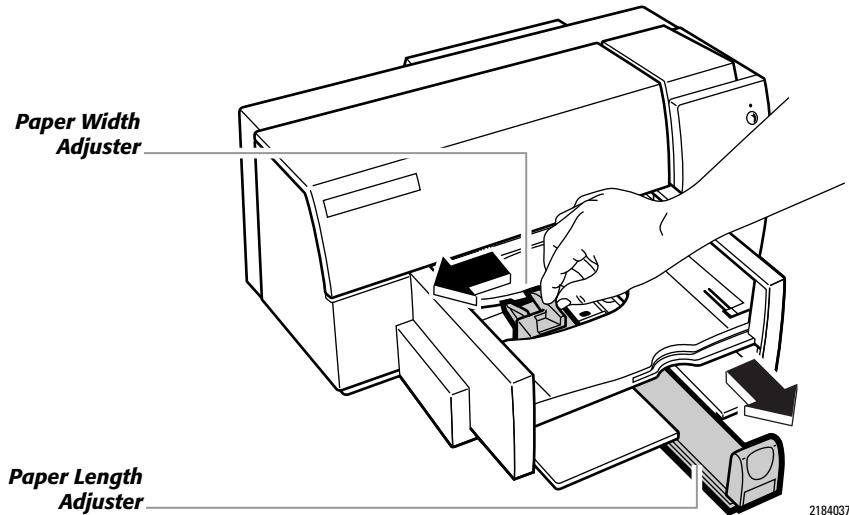


Make sure the creased flap edge of the envelope aligns with the right side of the single envelope slot.

3. Slide the envelope through the slot until it stops.
Make sure the envelope is inserted all the way into the slot and that it is not skewed or bent.
4. Set the software to print on the size and type of envelope now in the printer.
5. Be sure to reset the software for the paper in the IN tray after printing on the envelope is completed.

Loading Envelopes in the IN Tray

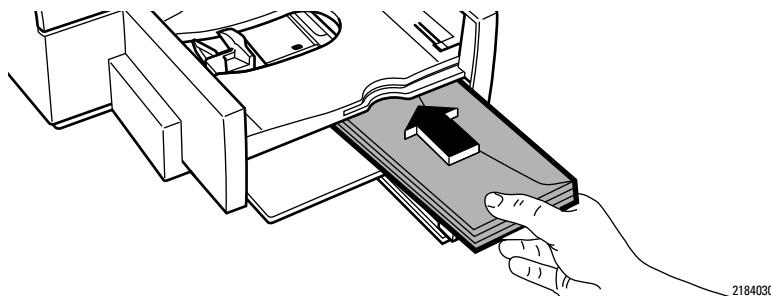
1. Slide the paper width adjuster to its leftmost position.
2. Pull out the paper length adjuster and remove any paper from the IN tray.



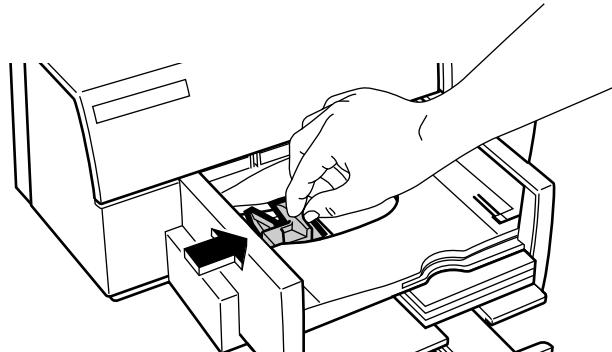
NOTE

Make sure the card guide (used when printing on index cards and postcards) is in the down position. (See the drawing on page 36 in the procedure *Using Index Cards and Postcards* for the location of the card guide.)

3. Remove a stack of up to 20 envelopes from their packaging and tap the short edge of the envelopes on a flat surface to even the stack.
4. Slide the envelopes evenly into the IN tray, address side down (flap side up).

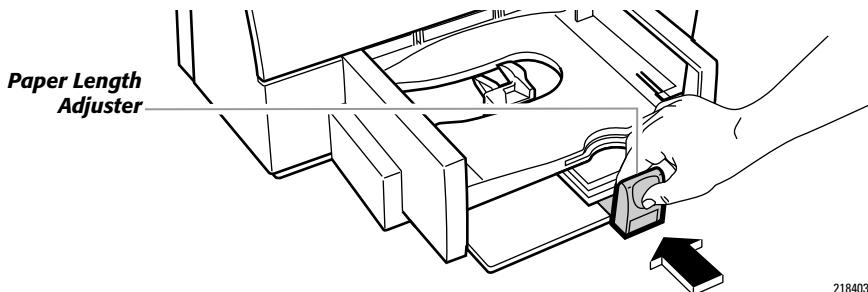


5. Make sure the creased flap edge of the stack aligns with the right side of the IN tray.
6. Slide the paper width adjuster to the right until it aligns with the left edge of the envelope stack.



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7. **For size Invitation A2 and C6 envelopes**, press the inside of the paper length adjuster handle to release and lower it. Lowering the paper length adjuster handle reduces the capacity of the IN tray to no more than 10 envelopes.
8. **For all sizes of envelopes**, push the paper length adjuster in toward the envelopes until it stops.



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Make sure the envelopes do not bend in the IN tray.

9. Set the software to print on the size and type of envelopes now in the printer.

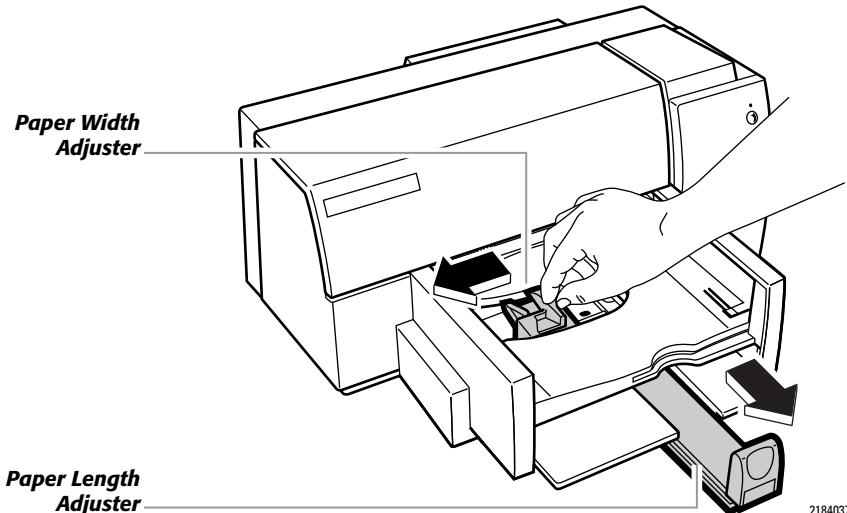
Using Avery Paper Labels

Use this procedure to print on sheets of Avery paper labels.

NOTE

Before printing on Avery paper labels, make sure that the label package states the labels are paper labels designed specifically for use with HP InkJet printers. Also, inspect the labels to make sure that they are not sticky, wrinkled, or pulling away from their protective backing. Only use full sheets of Avery paper labels.

1. Slide the paper width adjuster to its leftmost position.
2. Pull out the paper length adjuster.

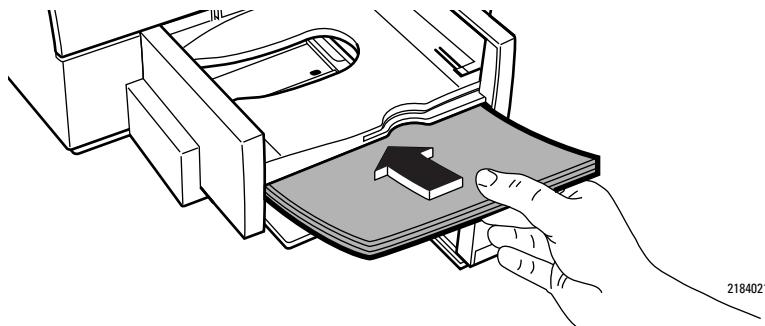


NOTE

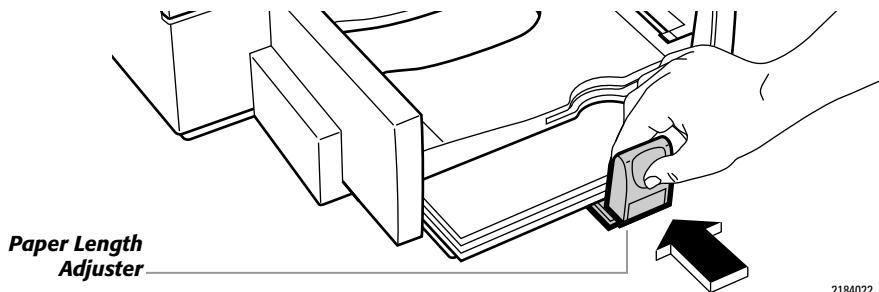
Make sure the card guide (used when printing on index cards and postcards) is in the down position. (See the drawing on page 36 in the procedure *Using Index Cards and Postcards* for the location of the card guide.)

3. Remove up to 25 sheets (U.S. letter or A4 size sheets) of Avery paper labels from their packaging. Fan the edges of the label stack to separate the pages.
4. Place the sheets of Avery paper labels, print side down, on top of approximately 25 sheets of plain paper. Be sure the combined stack of labels and paper does not exceed approximately $\frac{1}{4}$ inch ($\frac{1}{2}$ cm) in height. Tap the short edge of the stack on a flat surface to even the stack.

5. Insert the combined stack of Avery paper labels and paper evenly into the IN tray, print side down, until it stops. Align the right edge of the stack with the right edge of the IN tray.



6. Push the paper length adjuster in toward the printer until it stops.



Make sure the sheets do not bend in the IN tray.

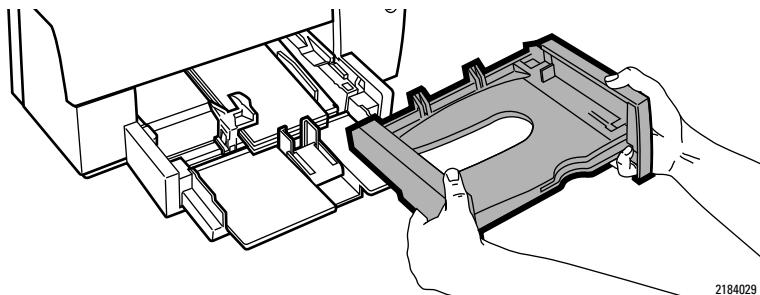
7. Set the software to print on the size, type, and orientation of labels now in the printer. Typically, use the Normal print mode and a plain paper type when printing on Avery paper labels.

Adding Paper, Envelopes, Cards, or Transparencies

If the printer runs out of paper, envelopes, cards, or transparencies while it is printing, the resume  light flashes and an alert box appears on your computer screen prompting you to add in more paper. To add items to the IN tray, remove all remaining paper from the IN tray and combine it with a new stack of the same paper. Tap the stack on a flat surface to even the stack. The stack should not exceed $\frac{1}{2}$ inch (1 cm) for paper, envelopes, or transparencies and should not exceed $\frac{1}{4}$ inch ($\frac{1}{2}$ cm) for cards or Avery paper labels. Push the resume  button to continue printing.

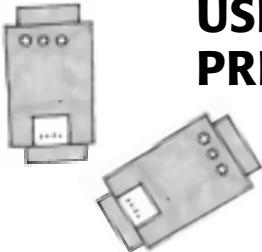
Removing Paper, Envelopes, Cards, or Transparencies

1. Remove the OUT tray.
2. Remove the paper, envelopes, cards, or transparencies.
3. Replace the OUT tray. If you encounter difficulty replacing the OUT tray, lift the top cover, wait a few moments for the print cartridge cradle to move to its center position, replace the OUT tray, then lower the top cover.



NOTE

Make sure the card guide (used when printing on index cards and postcards) is in the down position. (See the drawing on page 36 in the procedure *Using Index Cards and Postcards* for the location of the card guide.)



USING PRINT CARTRIDGES

Storing and Using Print Cartridges

To maintain excellent print quality from your print cartridges:

- Keep print cartridges in their sealed packages, at room temperature (60°- 78°F or 15.6°- 26.6°C), until you are ready to use them.
- Turn off the printer and allow the print cartridges to return to the right side of the printer for proper capping of the nozzles before unplugging the power module or turning off any attached power strip.

NOTE

When either print cartridge runs out of ink, replace the empty print cartridge. If you do not have a new print cartridge, leave the empty print cartridge in the cradle until you can replace it. The printer will not print with only one print cartridge installed.

CAUTION

The ink in the cartridges has been carefully formulated by Hewlett-Packard to ensure superior print quality and compatibility with the printer. Do not attempt to refill a print cartridge; damage to the printer or print cartridge resulting from modifying or refilling a print cartridge is not the responsibility of Hewlett-Packard.

To install the print cartridges in your printer, follow the procedure *Insert the Print Cartridges* on page 7.

NOTE

Be careful not to touch the ink nozzles or the copper contacts.

Aligning the Print Cartridges

You must align the black and color print cartridges each time you replace or reinstall a print cartridge. This ensures that the black and color inks are aligned when used together on the same line of text or within the same picture.

NOTE

DOS users can align the print cartridges from the HP DeskJet Control Panel for DOS. See the appendix, *Printing from DOS*, for details.

1. Make sure the printer is on and the power  light is lit.
2. Be sure the printer's IN tray contains plain paper.



Don't waste your HP Premium Glossy paper by using it to align the cartridges.

3. Double-click the HP Toolbox icon on the computer screen.
4. Click the **Printer Services** tab. Then click **Align the print cartridges**. Follow the directions on the computer screen.

Removing a Print Cartridge

1. With the printer turned on, open the top cover.

In a few moments the print cartridge cradles automatically move to the center of the printer and the resume  light flashes.

2. Grasp the top of the print cartridge and pull it toward you until the cartridge pops loose.
3. Lift the print cartridge out of the cradle.
4. Discard the cartridge if it is empty of ink.

CAUTION

Keep new and used cartridges out of the reach of children.

Cleaning the Print Cartridges

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volumat. Ut**

NOTE

Clean the print cartridges when you notice that lines or dots are missing from your printed text and graphics, as shown to the left. Usually, the print cartridges can be cleaned from the HP Toolbox or from the buttons on the front of the printer.

NOTE

Do not clean the print cartridges unnecessarily, as this wastes ink and shortens the print cartridge life.

NOTE

DOS users can clean the print cartridges from the HP DeskJet Control Panel for DOS. See the appendix, *DOS Printing Guide*, for details.

From the HP Toolbox:

1. Double-click the HP Toolbox icon on the computer screen.
2. Click the **Printer Services** tab.
3. Click **Clean the print cartridges**. Follow the directions on the computer screen.

From the printer buttons:

1. With the printer turned on, press and hold down the power  button.
2. While still holding down the power  button, press and release the resume  button seven times.
3. Release the power  button.

Printer Cleaning Procedure

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Ink streaking is easily prevented or corrected by doing scheduled cleaning to three areas of the printer: the print cartridges, the print cartridge cradle, and the service station. It is recommended that you perform this cleaning every 3 months.

Materials You Will Need

Before you start, make sure you have the following materials available.

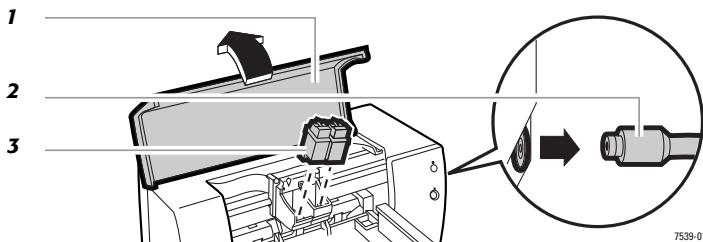
- Cotton swabs or any soft material that will not come apart or leave fibers (for example, a scrap piece of clean cotton cloth)
- Distilled, filtered, or bottled water (Tap water may contain contaminants that can damage the print cartridges.)

NOTE

Be careful not to get ink on your hands or clothing.

Remove the Print Cartridges

1. Turn the printer on and lift the printer's top cover. The print cartridges will move to the center of the printer.



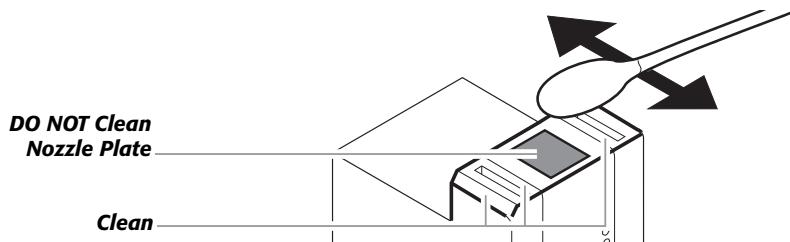
2. After the print cartridges have moved to the center of the printer, unplug the black power cord from the back of the printer.
3. Remove the print cartridges and place them on their sides on a scrap piece of paper.

CAUTION

Once you've removed the print cartridges, make sure that they are not outside of the printer more than 30 minutes.

Clean the Print Cartridges

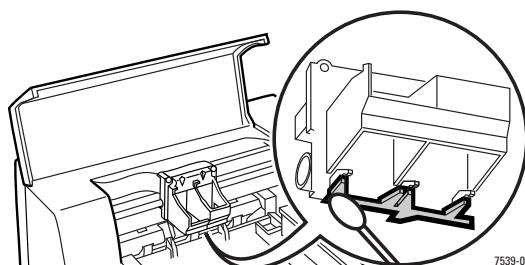
1. Grasp the black print cartridge by the colored cap.
2. Dip a clean cotton swab into distilled water and squeeze any excess water from the swab.
3. Clean the face and edges of the print cartridge as shown. Do not wipe the nozzle plate.
4. Hold the print cartridge up to the light to inspect for fibers on the face and edges. If fibers are still present, repeat steps 2 and 3 until the fibers are gone.
5. Repeat steps 1-4 with the color print cartridge using a clean, moistened cotton swab to avoid any contamination.

**CAUTION**

Keep print cartridges out of reach of children.

Clean the Print Cartridge Cradle

1. Locate the cradle that held the print cartridges.
2. Locate the three black, hook-shaped arms on the bottom of the cradle. Slightly raising the front of the printer will give a better view. Lower the printer before proceeding.
3. Using clean, moistened swabs, wipe the flat surfaces (shaded area) on the undersides of each arm from back to front. Repeat until no ink residue is seen on a clean swab.



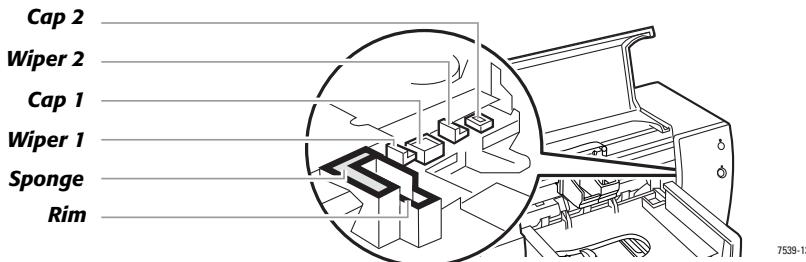
Clean the Service Station

1. Using a clean, moistened swab, clean the rim of the sponge holder.
2. Remove any built-up ink and fibers from the top of the sponge. If the sponge is higher than the rim, use the cotton swab to push it below the rim.
3. Using a clean, moistened swab, clean wiper 1 and the top surface of cap 1.

CAUTION

Use a light force when cleaning the print cartridge caps. A heavy force may unseat the caps, eventually causing damage to the print cartridges.

4. Using a clean, moistened swab, clean wiper 2 and the top surface of cap 2.



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Reinstall the Print Cartridges

1. Reinstall the print cartridges and close the printer's top cover.
2. Reinsert the power cord into the back of the printer.
3. Print a self-test page. On the **Printer Services** tab of the HP Toolbox, click the **Print a self-test page** button.
4. Examine the printout for ink streaking.

NOTE

This procedure should remove all fibers that would cause ink to streak on a print-out; however, it is possible that fibers may have been missed. If the printout still shows streaking, repeat the procedure until the self-test printout is clear and sharp. It is recommended that you perform this cleaning every 3 months. This procedure and additional maintenance tips are located on the World Wide Web at <http://www.deskjet-support.com/maintenance>.



IF YOU HAVE A PRINTING PROBLEM

How You Can Find the Solution

If you get a message at the computer screen, follow the instructions given. If you don't receive an error message, but you suspect a printer problem, check the HP Toolbox: click its Troubleshooting tab, then click the appropriate category and explore the possible solutions. See page 52 for how to locate the HP Toolbox. See page 52 for how to use the tabs of the HP Toolbox for troubleshooting.

If your printer does not print, go directly to *If Nothing Prints*, next. Otherwise, find the symptom that most closely matches your printer's problem in the following troubleshooting tables. For each listed symptom, more than one solution is possible. The first solution given is the most probable corrective action for the symptom. However, if that solution does not solve the problem, perform the other solutions in the order they appear until the problem is solved.

If you are unable to solve a problem using the information in this section, refer to *Contacting Customer Support* at the end of this section.

Where's the HP Toolbox?

The HP Toolbox tells you how to print and how to troubleshoot your printing problems. It even aligns and cleans your print cartridges for you. For each Windows system, here are a couple of places to find it.

Windows 95



- Double-click the HP Toolbox shortcut icon on the desktop.
- Click the HP Toolbox icon in the taskbar. (The HP Toolbox icon is displayed in the taskbar when the HP Toolbox is open and you're printing).

Windows 3.1x

The HP Toolbox appears on the desktop whenever you're printing. To open the HP Toolbox at any other time:

- Double-click the HP Toolbox icon in the HP DeskJet Utilities group in the Program Manager.
- Double-click the HP Toolbox icon. It's on your desktop when you start your computer.

NOTE

If you're having trouble finding the desktop, press ALT+TAB until you see it.

Using the HP Toolbox

When problems occur, the quickest way to find a solution is to use the "online" troubleshooting feature. With a few clicks of the mouse button, you'll find your specific problem and details on how to fix it.

1. Double-click the HP Toolbox icon.
2. Click the Troubleshooting tab.
3. Click the appropriate category.
4. Click on the description of the problem.
5. Click to further explore possible solutions.

If Nothing Prints

When the printer is in the ready-to-print state, the power  light is lit and the resume  light is off. When the computer is sending a file to the printer, and when the printer is printing a file, the power  light blinks and the resume  light is off. When the printer needs attention or when a printer error occurs, either the resume  light blinks or both lights blink alternately.

If both print cartridge cradles contain properly installed print cartridges, and if paper, envelopes, cards, Avery paper labels, or transparencies are loaded in the printer, and if the printer does not print, observe the state of the printer's power  and resume  lights, and then find the symptom in the following table that best matches the observed condition of your printer.

For each listed symptom, more than one solution is usually possible. The first solution given is the most probable corrective action for the symptom. However, if that solution does not solve the problem, perform the other solutions in the order they appear until the problem is solved.

Symptom	Solution
<i>Both lights on the front of the printer are off, and nothing prints.</i>	The printer is not turned on or is improperly connected to the power source. Make sure the power module plug is firmly inserted in the printer's power socket and the other end of the cord is plugged into an outlet. Make sure any attached power strip is turned on and plugged into an outlet. If possible, try using a different power outlet. Then turn on the printer by pressing the power  button.
	The printer is in an undefined state. If open, close the top cover on the printer. Cycle the power to the printer by pressing the power  button. You may need to press the power  button a second time.
	The printer failed or the computer-to-printer connection failed. Turn off the printer, disconnect the printer cable from the back of the printer, and turn the printer on again. If the lights stay off, the printer failed: see <i>Contacting Customer Support</i> on page 61.

SECTION FOUR

Symptom	Solution
<i>The power  light is on, but no page came out of the printer.</i>	Make sure the printer is on, that all connections are firm, and you are using the correct cable; the bi-directional HP IEEE-1284 Compliant Parallel Interface cable is recommended.
	Make sure the top cover of the printer is closed, and you put paper into the lower (IN) tray correctly.
	The printer may not be in the ready-to-print state. Press the resume  button on the front of the printer. If the resume  light is blinking, check the error message displayed on your computer screen for additional instructions. Resend the document. If the document still doesn't print, cycle the power to the printer off and back on by pressing the power  button twice. Then resend the document.
	The printer is improperly connected to the computer. Make sure the printer cable is firmly connected to the parallel port of the printer and the computer.
	Close any screen saver or other software programs that are open and running in the background. Restart Windows, then reinstall the printer software.
	Make sure your software is properly set up for the printer. Follow the instructions in your software program's manual.
	Tape is covering the ink nozzles or vent hole of a print cartridge. Remove the print cartridge and remove any pieces of tape. Reinstall the print cartridge.
	One of the print cartridges is improperly installed in the printer. Make sure each print cartridge snaps into place with the arrow aligned with the dot(s) on the cradle top. Make sure that both print cartridge cradles contain a properly installed print cartridge.
	One of the print cartridges is clogged or out of ink. Clean the print cartridges as described on page 47. If this doesn't fix the problem, install a new print cartridge.
<i>Both lights are on, and nothing prints.</i>	The printer failed. Turn off the printer and turn it on again. If the lights stay on, see <i>Contacting Customer Support</i> on page 61.
<i>The printer appears to be printing, but the paper is blank when ejected.</i>	Make sure both print cartridges are properly installed, that tape is not covering the ink nozzles, and that the cartridges are not clogged or out of ink. Make sure you've selected the HP DeskJet 670C Series printer as the default printer.

Symptom	Solution
<i>The resume  light is blinking and nothing prints.</i>	The top cover of the printer is open. Close the top cover. One of the print cartridges is improperly installed in the printer. Open the top cover. Make sure both print cartridges snap into place with the arrows aligned with the dot(s) on the cradle top. Then close the top cover.
	The printer is out of paper. Load paper as described in <i>Section 2</i> . Push the paper length adjuster toward the paper until it stops. Make sure the paper does not bend in the IN tray. Press the resume  button on the front of the printer.
	The paper is improperly loaded. Remove paper and reload it. Push the paper length adjuster toward the paper until it stops. Make sure the paper does not bend in the IN tray. Press the resume  button on the front of the printer.
	The printer did not receive a form feed command from the software program. Press the resume  button on the printer to initiate a manual form feed.

If Paper, Envelopes, Cards, Labels, or Transparencies Don't Pass Through the Printer

Symptom	Solution
<i>Paper does not get picked up from the IN tray.</i>	The paper in the IN tray is not pressed against the paper feeder of the printer. See <i>Section 2</i> for the correct paper loading procedure. The paper path in the printer is blocked. Clear the paper path.
<i>Paper does not advance into the printer, or paper does not eject from the printer.</i>	You are printing on a transparency or special paper and the automatic dry timer is operating correctly. Wait for the page to drop into the OUT tray. Paper is improperly loaded or the OUT tray is improperly installed. See <i>Section 2</i> for paper and tray loading procedures. Different paper types, sizes, or weights are loaded in the IN tray at the same time. Remove the stack and reload one paper type and size. The printer did not receive a form feed command from the software program. When the resume  light blinks, press the resume  button on the printer to initiate a manual form feed.
	The paper is jammed in the printer. Clear the paper path.

SECTION FOUR

Symptom	Solution
<i>Printer advances multiple sheets of paper.</i>	<p>The paper is stuck together. Remove the paper, separate stuck paper, and reload it.</p> <p>Too much paper is in the IN tray at one time. Remove a few sheets of paper.</p> <p>Different paper types, sizes, or weights are loaded in the IN tray at the same time. Remove the stack and reload paper of only one type and size.</p>
<i>Printer ejects piece after piece of paper, printing only a single character on each piece.</i>	<p>The printer failed or the computer-to-printer connection failed. Turn off the printer, disconnect the printer cable from the back of the printer, and turn the printer on again. Print a self-test as described on page 14. If the self-test doesn't print, the printer failed: see <i>Contacting Customer Support</i> on page 61. If the printer is not the problem, cancel all print jobs at the computer, reconnect the printer cable, and resend the file to the printer. If the printout is still garbled, the problem may be with the printer cable, the cable connections, the computer port, or the selected printer driver. Try another printer cable. If the printer cable is not the problem, see <i>Contacting Customer Support</i> on page 61.</p>
<i>Envelopes do not advance into the printer from the IN tray or the single envelope slot.</i>	<p>The envelopes are improperly loaded. See <i>Section 2</i> for the correct envelope loading procedure.</p> <p>The envelopes in the IN tray are bent or damaged, or too many or too few envelopes are loaded in the IN tray.</p>
<i>Cards do not advance into the printer.</i>	<p>The cards are incorrectly loaded in the IN tray. See <i>Section 2</i> for the correct card loading procedure.</p> <p>An unsupported type of card is loaded in the IN tray.</p>

If Print Quality is Poor

You can often solve print quality problems by using only the *print side* of the paper, envelopes, cards, or transparencies, or by loading a different media type.

Symptom	Solution
<i>Print is fuzzy, or lines or dots are missing from the characters in the printout, making the ink coverage inconsistent.</i>	<p>The connection between a print cartridge and the cradle is intermittent. Remove the print cartridge and reinstall it.</p> <p>You can control the amount of ink on the page by changing the Print Quality (on the Setup tab of the HP print settings box).</p> <p>You may have run out of ink. Replace the cartridges.</p> <p>If ink is smearing or is splotchy, you might need to clean the ink cartridges, as described on page 47.</p>
<i>Color and black printing are mispositioned.</i>	<p>The print cartridges need to be aligned, as described in page 46.</p>
<i>Garbled or strange text characters (such as hearts or smiling faces), or distorted graphic images appear in printout.</i>	<p>The printer failed or the computer-to-printer connection failed. Turn off the printer, disconnect the printer cable from the back of the printer, and turn the printer on again. Print a self-test as described on page 14. If the self-test doesn't print, the printer failed: see <i>Contacting Customer Support</i> on page 61. If the printer is not the problem, reconnect the printer cable and resend the file to the printer. If the printout is still garbled, the problem may be with the printer cable, the cable connections, or the computer port. Try another printer cable. If the printer cable is not the problem, see <i>Contacting Customer Support</i> on page 61.</p>
<i>Ink is smearing or paper is wrinkling.</i>	<p>Let the ink dry before you handle the printed pages.</p> <p>Make sure the paper type setting matches the type of paper, cards, envelopes, or transparency film in the printer.</p> <p>Darker intensity settings print more ink; lighter intensity settings print less ink. Reduce the amount of ink printed by manually reducing the intensity setting.</p> <p>The paper is inappropriate. Try another type of paper.</p> <p>The wrong type of labels were used or the labels were loaded incorrectly in the IN tray. The ink does not dry on plastic and clear labels.</p> <p>The print cartridges, cradle, or service station needs cleaning. Perform the cleaning procedures as described beginning on page 48.</p>

If Margins are Printed Wrong

If the placement of text and pictures on your printed pages is not what you expected, first be sure that you have set your software to print within the printable area for the size and orientation of paper, envelopes, or cards loaded in the printer.

Symptom	Solution
<i>Margins are not printing as expected.</i>	Check your margin settings in the software program; make sure they are in accordance with those listed in this User's Guide. Check the page orientation in the software program or in the HP print settings box. Make sure the paper is loaded in the correct orientation.
	Paper. The paper was improperly loaded. Align the paper stack against the right side of the printer. Make sure no paper is over the paper width adjuster. Make sure the paper does not bend in the IN tray.
	Cards. The cards are incorrectly loaded into the printer. Make sure the card guide is raised and align the right edge of the card stack against the card guide.
	Envelopes. The left margin of the envelope is always at least 0.84 inch (21 mm). The envelopes are incorrectly loaded into the printer. Align the envelope stack against the right side of the IN tray. Make sure the card guide is down. When printing on an individual envelope inserted into the single envelope slot, make sure the right side of the envelope presses evenly against the right side of the single envelope slot.
<i>Printing is slanted on paper, envelope, or card.</i>	The paper is improperly loaded, or the OUT tray is improperly installed. See Section 2 for the correct paper and tray loading procedures. Unsupported or different paper types, sizes, or weights are loaded in the printer. Remove the stack and reload paper of only one type, size, and weight.

If Text or Pictures are Printed Wrong

If the text or pictures of your documents are printed incorrectly on the pages, first be sure that you have set your software to print within the printable area of the paper loaded in the printer. Then make sure that you have used the formatting features of your software to create the design or layout as you intended.

Symptom	Solution
<i>Font selections are not printing.</i>	The fonts are not installed or are selected improperly. See your software program manual for selecting fonts within the program. Also make sure that the selected fonts are installed on your computer.
<i>The printout is illegible.</i>	<p>The wrong printer driver may be selected. Reinstall the printer driver using the installation instructions in <i>First Time Setup</i>.</p> <p>The print settings in your software program are incorrect. Make sure the print settings in your software program are set as desired.</p> <p>See <i>If Print Quality is Poor</i> on page 57.</p>
<i>Black and white instead of color, or wrong colors are printed.</i>	See <i>If Colors are Printed Wrong</i> next.

If Colors are Printed Wrong

If you observe that the colors in your documents are printed incorrectly on the pages, first be sure that you have set your software for color printing. Next, be sure the print cartridges are aligned.

If you still experience problems with the printing of colors, find the symptom and solution in the following table.

Symptom	Solution
<i>Missing colors.</i>	Color printing is not selected in your software. Be sure to select a color printout mode in the HP print settings box.
	The color print cartridges may need cleaning. Clean the print cartridges as described on page 47.
	Make sure you didn't select Print in Grayscale in the HP print settings box.

SECTION FOUR

Symptom	Solution
<i>Printed colors don't match screen colors.</i>	<p>The print settings are inappropriate. See your software program's manual for the correct print settings.</p> <p>The color print cartridge has run out of one or more inks. Install a new color print cartridge.</p> <p>The paper is inappropriate. Try another type of paper. For high-quality color printing results, use HP Premium Glossy Paper.</p>
<i>Colors appear washed out.</i>	<p>One of the print cartridges is clogged. Print a self-test as described on page 14.</p> <p>You can control the amount of ink on the page by changing the Print Quality (on the Setup tab of the HP print settings box). If the printing appears faded or the colors are dull, click Normal or Best. If the colors bleed into one another or the ink smears on the sheet, click Normal or EconoFast. You may have run out of ink. Replace the cartridges.</p> <p>The paper is inappropriate. Try another type of paper. See Section 5. For high-quality color printing results, use HP Premium Glossy Paper.</p>
<i>Black ink is mixing with color ink along the print boundaries.</i>	<p>The transparency was moved or placed in a protective sleeve while still wet. Allow 10 to 15 minutes for the ink to dry before moving it.</p> <p>The print settings are inappropriate. See your software program's manual for the correct print settings.</p> <p>The paper is inappropriate. Try another type of paper.</p> <p>The print cartridges are misaligned. Align the print cartridges as described on page 46.</p>
<i>Black printing is fading and the colors are missing or hues are changing.</i>	<p>One of the print cartridges is running out of ink. Replace the empty print cartridge and align the print cartridges as described on page 46.</p> <p>A print cartridge is dirty or clogged. Print a self-test as described on page 14.</p>
<i>Black and white output instead of color.</i>	<p>Color printing is not selected in your software; be sure to select a color printout mode.</p> <p>Make sure you do not have Print in Grayscale selected in the HP print setting box.</p> <p>The color settings are inappropriate; adjust them in the software.</p>

Contacting Customer Support

If you have questions, either general ones regarding how your printer works or specific ones regarding a problem you're having, you have several possibilities for getting the answers.

Troubleshooting using the Toolbox

If you have a specific problem, the quickest way to find a solution might be right at your fingertips. Check the online troubleshooting feature, located in the HP Toolbox (see page 52 to find out how to get to the Toolbox). If the suggestions in the Toolbox don't solve your problem, you still have many options, as described next.

Electronic support information

If you have a modem connected to your computer and subscribe to an online service or have direct access to the Internet, you can obtain a wide variety of information about your printer.

User forums

You can get friendly help from knowledgeable users and system operators in the CompuServe and America Online user forums. In the user forums, you can leave your question and check back later for ideas and solutions suggested by other users. You can read through old messages left by other users to see if anyone else has had a problem similar to yours, and has provided the solution online.

Also, both forums keep a list of FAQs (Frequently Asked Questions) which you can peruse for hints.

CompuServe: Go to the HP Peripherals forum (Go HPPER). To subscribe to CompuServe, in the U.S. call 1-800-848-8199 and ask for representative #51. Canadian residents should consult their phone directory for the nearest CompuServe office. (This service is not operated by Hewlett-Packard.)

America Online: Access the HP forum. Click "keyword" on the "Go To" menu, type "HP", and press the Enter key to bring the HP forum home directly to your screen.

HP web site

If you have access to the Internet, you can check out HP's web site at URL <http://www.hp.com> or <http://www.hp.com/go/peripherals> for support documentation and the latest news from HP.

HP First Fax

Technical documentation and troubleshooting information is available 24 hours a day, seven days a week, every day of the year. Dial (800) 333-1917 from any touch-tone phone to access HP First Fax. By selecting from a series of menu choices, you can identify documents containing the information you need. You may request up to three documents per call. We'll fax them to you within minutes.

Printer software

Printer software allows your printer to talk with your computer. (Printer software is also referred to as a printer driver or a printer file.) If you need to replace or upgrade a printer driver, you have several options:

- Download the driver by accessing CompuServe, America Online, or HP's web site, as described on the previous page.
- Download the driver from the HP Bulletin Board. You'll need a modem and communications software, set to N, 8, 1. Dial (208) 344-1691 and choose from the menus provided.
- If you don't have access to CompuServe, America Online, or the World Wide Web, you can get a new driver (if one is available) on disks. HP provides Windows 3.1, 3.11, or Windows 95 printer drivers and printer driver updates for the cost of the disks plus shipping. You can order them by calling (970) 339-7009 Monday-Saturday, 24 hours a day. (For DOS printer drivers, contact the manufacturer of your software program.)

Calling HP Customer Support

Our friendly support staff can help you get your printer up and running or help you figure out how to get your broken printer repaired. Call our HP support phone at (208) 344-4131. They're ready to help you Monday-Friday from 6:00 am to 10:00 pm (MST) and Saturdays from 9:00 am to 4:00 pm (MST).

The Customer Support representatives might ask you to try a few things, so please be at your computer and printer when you call. This service is free during the warranty of your printer; only long distance charges may apply.

After the warranty

You can still get help from HP, for a fee. Prices are subject to change without notice. (Online help is still available for free!)

- For quick questions in the United States only, call (900) 555-1500. The charges are \$2.50 per minute and begin when you connect with a support technician.
- For calls from Canada, or for calls in the U.S. that you anticipate might be longer than ten minutes in length, call (800) 999-1148. The fee is \$25 per call, charged to your Visa or MasterCard.
- HP also offers a variety of options to complement the standard warranty. Call (800) 446-0522 in the U.S. or (800) 268-1221 in Canada for details.

Extended warranty options

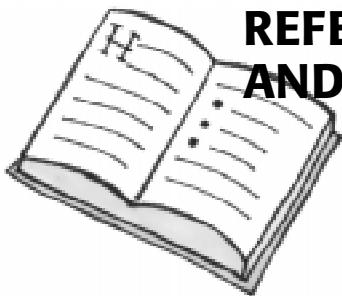
If you would like to extend your printer coverage beyond the one year factory warranty, you have the following options:

- Consult your reseller to get extended coverage.
- If your reseller does not offer service contracts, please call Hewlett-Packard directly and ask about our service agreement offering. In the U.S. call (800) 446-0522, in Canada call (800) 268-1221. For service agreements outside the U.S. and Canada, contact your local HP Sales Office.

A note about letters

If you need technical help or have something you want to say to HP, it is best that you call us when you are in front of your computer and printer. This way we can work through the problem quickly. If you write a letter to HP, then we must call you back, which can be very difficult to do. Because of this, we request that you call us rather than write us, so we can help you immediately!

SECTION FOUR



REFERENCE, SPECIFICATIONS, AND ORDERING INFORMATION

Maintaining Your Printer

- Use a soft cloth moistened with water to wipe dust, smudges, and stains off.
- Keep print cartridges in their sealed containers, at room temperature, until you are ready to use them.
- Keep the print cartridges in their print cartridge cradles at all times to keep them from drying out or becoming clogged.
- Do not unplug the printer before printing is complete and the print cartridge cradles have returned to their “home” position on the right side of the printer; doing so can dry out the print cartridges.
- The printer does not work with only one print cartridge installed. If one of the print cartridges runs out of ink, leave the empty cartridge in the cradle until you can replace it.
- The interior of the printer does not require cleaning. Keep fluids away from the interior of the printer.

Increasing Printer Performance

The print speed and overall performance of your printer can be affected by several things:

- The amount of RAM in your computer can determine how fast your documents are sent to the printer. Increasing the amount of RAM in your computer can speed up this process as well as make your computer work more efficiently when you are doing other things besides printing.
- The printer driver that you are using to print your documents can make a significant difference in the quality of your printed output. Make sure you are using an up-to-date version of an HP printer driver designed specifically for your printer model. See *Contacting Customer Support* on page 61 for how to get an updated printer driver.
- The size and complexity of the documents you print can make a difference in your printer's performance. Graphics are usually more complex and print more slowly than a file that contains only text.
- The processing speed of your computer determines how fast your document is sent to the printer. For example, a computer with a 486 processor runs faster than a computer with a 386 processor.
- Running numerous software programs at one time slows down printing, because they are using the RAM in your computer. Therefore, limit the number of programs or documents you open at one time.
- Screen fonts are stored in RAM, which means they use up memory that the printer may need in order to print. Delete fonts you do not often use.

Ink Drying Times

The HP DeskJet 670C Series printer automatically sets the drying time for each printed page (based on paper type, print quality, and inks printed) to ensure that the ink does not smear before the page is ejected into the OUT tray. You can override the automatic timer and force the page to be ejected into the OUT tray by pressing the resume  button. The standard times allotted for ink drying are listed in the following table.

Standard Drying Times

Paper Type	EconoFast Black	Color	Normal Black	Color	Black	Best Color
Plain Paper	0 sec.	0 sec.	14 sec.	20 sec.	25 sec.	25 sec.
Premium Paper	0 sec.	0 sec.	15 sec.	20 sec.	25 sec.	25 sec.
Transparency or Glossy Paper	1 min.	2 min.	3 min.	6 min.	4 min.	6 min.

About Page Orientation

The HP DeskJet 670C Series printer prints in portrait or landscape orientation. Portrait orientation is the default for paper; landscape is the default for envelopes. Select the page orientation in your software program or in the Paper tab of the printer software.



Custom Paper Limitations

When the Custom Paper Size paper setting is selected in the printer software, the paper width must be between 5 and 8.5 inches (127 and 215 mm) and the paper length must be between 5.83 and 14 inches (148 and 356 mm).

The Printable Area

The HP DeskJet 670C Series printer can print within the area described here. Most software programs allow you to specify where print appears on the page with margin settings or column width settings. When you set margins or columns in your software, be sure to set them within the printer's printable area.

SECTION FIVE

Minimum Margins* for Paper and Cards in Portrait Orientation from Windows Programs

Paper Size	Left and Right Margins	Bottom Margin
U.S. letter 8.5 x 11 in. (216 x 279 mm)	0.25 in. (6.3 mm)	0.59 in. (14.9 mm)
U.S. legal 8.5 x 14 in. (216 x 356 mm)	0.25 in. (6.3 mm)	0.59 in. (14.9 mm)
A4 size 8.27 x 11.7 in. (210 x 297 mm)	0.13 in. (3.4 mm)	0.59 in. (14.9 mm)
A5 size 5.8 x 8.3 in. (148 x 210 mm)	0.125 in. (3.2 mm)	0.84 in. (21.2 mm)
B5 size 7.2 x 10.1 in. (182 x 257 mm)	0.167 in. (4.2 mm)	0.84 in. (21.2 mm)
Executive 7.25 x 10.5 in. (184 x 267 mm)	0.25 in. (6.3 mm)	0.59 in. (14.9 mm)
U.S. cards 4 x 6 in. (102 x 152 mm)	0.125 in. (3.2 mm)	0.84 in. (21.2 mm)
U.S. cards 5 x 8 in. (127 x 203 mm)	0.125 in. (3.2 mm)	0.84 in. (21.2 mm)
A6 cards 4.1 x 5.83 in. (105 x 148 mm)	0.125 in. (3.2 mm)	0.84 in. (21.2 mm)
Hagaki postcards 3.9 x 5.8 in. (100 x 148 mm)	0.167 in. (4.2 mm)	0.84 in. (21.2 mm)

*Note: The top margin is 0.04 inch (1 mm) for all paper sizes.

Minimum Margins* for Envelopes in Landscape Orientation from Windows Programs

Envelope Size	Left Margin	Right Margin
U.S. No. 10 4.12 x 9.5 in. (105 x 241 mm)	0.84 in. (21.2 mm)	0.04 in. (1 mm)
DL 4.33 x 8.66 in. (110 x 220 mm)	0.84 in. (21.2 mm)	0.04 in. (1 mm)
C6 4.48 x 6.37 in. (114 x 162 mm)	0.84 in. (21.2 mm)	0.04 in. (1 mm)
Invitation A2 4.37 x 5.75 in. (111 x 146 mm)	0.84 in. (21.2 mm)	0.04 in. (1 mm)

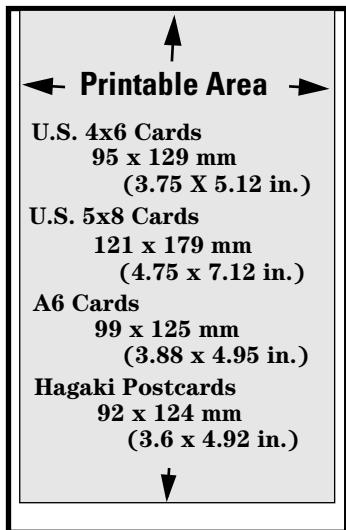
*Note: The top and bottom margins are 0.125 inch (3.2 mm) for all envelope sizes.

NOTE

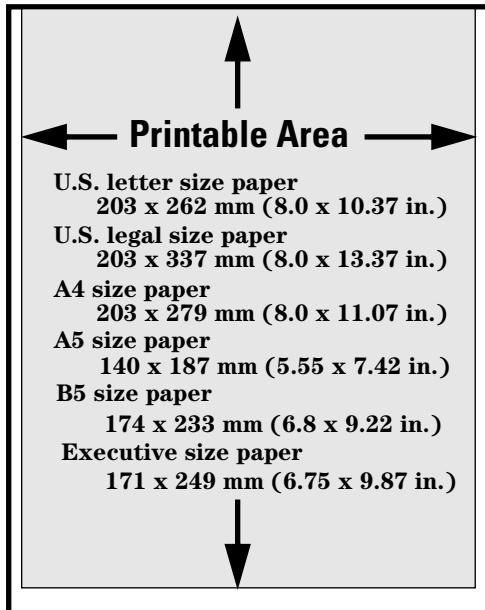
The printing margins in effect when printing from a DOS program can vary. See the documentation provided with your DOS program for more information.

Printable Areas:

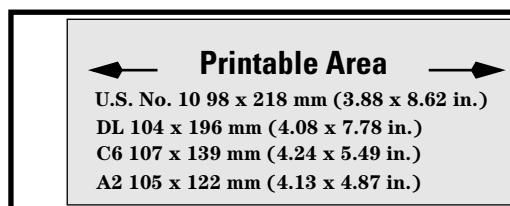
**Printable Area
For Cards:**



**Printable Area
For Sheet Paper:**



**Printable Area
For Envelopes:**



SECTION FIVE

Specifications

Print Method

Plain paper drop-on-demand thermal inkjet printing

Black Print Speed*

Best mode: 1 page per minute

Normal mode: 2.5 pages per minute

Normal mode (DOS): 134 cps at 10 cpi

EconoFast: 4 pages per minute

EconoFast (DOS): 270 cps at 10 cpi

Color Print Speed*

Best mode: 0.3 pages per minute

Normal mode: 0.75 pages per minute

EconoFast: 1.5 pages per minute

Black Resolution

Best mode: 600 x 600 dpi

Normal mode: 600 x 300 dpi

EconoFast: 300 x 300 dpi

Color Resolution

300 x 300 dpi on plain paper

Resolution on glossy and premium paper and transparency film:

600 x 300 dpi black and color

DOS (graphics)

Full-page 75, 150, 300 dpi

Printer Command Language

HP PCL Level 3

Character Sets

United Kingdom (ISO 4), German (ISO 21), French (ISO 69), Italian (ISO 15), Danish/Norwegian (ISO 60), Swedish (ISO 11), Spanish (ISO 17), ANSI ASCII (ISO 6), Legal, PC-8, Roman-8, PC-850, PC-8 Danish/Norwegian, ECMA-94 Latin 1 (ISO 8859/1), PC-852, Latin 2 (ISO 8859/2), Latin 5 (ISO 8859/9), and PC-8 Turkish

Vertical Alignment

± 0.002 in.

Software Compatibility

MS Windows compatible.

Compatible with an extensive range of DOS software programs.

OS/2 compatible.

Reliability

20,000 hours MTBF

1000 total pages per month max.

Built-in (internal) Fonts

Courier (Portrait and Landscape Orientations)

Pitch: 5, 10, 16.67, 20 cpi

Point size: 6, 12, 24 pt.

Style: Upright (Italic: 5, 10, 20 cpi)

Stroke weight: Normal, Bold

CG Times (Portrait and Landscape Orientations)

Pitch: Proportional

Point size: 5, 6, 7, 8, 10, 12, 14 pt

Style: Upright, Italic

Stroke weight: Normal, Bold

Letter Gothic (Portrait and Landscape Orientations)

Point and pitch: 6, 12, and 24 pt. for 6,12 and

24 cpi

(Upright Only): 4.75, 9.5, and 19 pt. for

16.67 cpi

Style: Upright

Stroke weight: Normal, Bold

Univers (Portrait and Landscape Orientations)

Pitch: Proportional

Point size: 5, 6, 7, 8, 10, 12, 14 pt

Style: Upright (Italic: 5, 6, 10, 12 pt)

Stroke weight: Normal, Bold

Product Certifications

Safety Certifications with Power Module: C2175A-UL, CSA, NOM C2176A-UL, TÜV, SEMKO, NEMKO, FIMKO, KEMA, LCIE, EZU, SEV C2177A-UL, SINGAPORE C2178A-UL, JET C2179A-UL C2180A-UL, SABS C2181A-UL, AUSTRALIA C2182A-UL, JUN

EMI Certifications with Power Module: FCC Class B when used with a Class B computing device (USA), EMC Directive 89/336/EEC (European Community), VCCI (Japan), SABS (So. Africa)

*Approximate figures. Exact speed will vary depending on the system configuration, software program, and document complexity.

Recommended Media Weight

Paper: 60 to 135 g/m² (16 to 36 lb)
 Envelopes: 75 to 90 g/m² (20 to 24 lb)
 Cards: 110 to 200 g/m² (110 lb index max.; 8.5 pt max. thickness)

Media Size

US letter 216 x 279 mm (8.5 x 11 in.)
US legal 216 x 356 mm (8.5 x 14 in.)
Executive 184 x 267 mm (7.25 x 10.5 in.)
EuropeanA4 210 x 297 mm
EuropeanA5 148.5 x 210 mm
B5-JIS 182 x 257 mm
Custom size: Width 127 to 216 mm (5.0 to 8.5 in.); Length 148 to 356 mm (5.83 to 14 in.)
US No. 10 envelope 104.7 x 241.3 mm (4.12 x 9.5 in.)

Invitation A2 Envelope (5.5) 4 3/8 x 5 3/4 in.

European DL envelope 220 x 110 mm

European C6 envelope 114 x 162 mm

Index card 101.6 x 152.4 mm (4 x 6 in.)

Index card 127 x 203.2 mm (5 x 8 in.)

European A6 card 105 x 148.5 mm

Japanese Hagaki Postcard 100 x 148 mm

US HP Premium Transparency Film 216 x 279 mm (8.5 x 11 in.)

European A4 HP Premium Transparency Film 210 x 297 mm

US HP Premium Glossy Paper 216 x 279 mm (8.5 x 11 in.)

European A4 HP Premium Glossy Paper 210 x 297 mm

US HP Premium InkJet Paper 216 x 279 mm (8.5 x 11 in.)

European A4 HP Premium InkJet Paper 210 x 297 mm

Media Handling (Built-In Feeders)

Sheets: up to 100 sheets

Multiple envelopes: up to 20 envelopes

Single envelope: only 1 envelope

Cards: up to 30 cards

Transparencies: up to 50 sheets

Labels: up to 25 sheets of Avery paper labels. Use only U.S. letter or A4 size sheets. Use only Avery paper labels specifically designed for use with HP InkJet printers.

OUT tray capacity: up to 50 sheets

Buttons/Lights

Resume and power

I/O Interface

Centronics parallel, IEEE 1284 compliant with 1284-B receptacle

Printer Memory

512 Kbyte built-in RAM
 32 Kbyte receive buffer

Dimensions

436 mm (17.2 in.) W x 199 mm (7.9 in.) H x 405 mm (16 in.) D

Weight

5.3 kg (11.6 lb)

Power Requirements

Power modules:

Input Voltage (depends on power module ordered): 100, 120, 127, 220, 230, or 240 VAC (+10%, -10%)

Frequency:

100 VAC	50/60 Hz (+3 Hz, -3 Hz)
120 VAC	60 Hz (+3 Hz, -3 Hz)
127 VAC	60 Hz (+3 Hz, -3 Hz)
220 VAC	50 Hz (+3Hz, -3 Hz)
220 VAC	60 Hz (+ 3 Hz, -3 Hz)
230 VAC	50 Hz (+3Hz, -3 Hz)
240 VAC	50 Hz (+3 Hz, -3 Hz)

Power consumption:

2 watts maximum when off

4.5 watts maximum non-printing

12 watts maximum printing

Operating Environment

Maximum operating temperature:

5°C (41°F) to 40°C (104°F)

Humidity: 10-80% RH non-condensing

Recommended operating conditions for best print quality: 15°C (59°F) to 35°C (95°F), 20 to 80% RH non-condensing

Storage temperature: -40°C (-40°F) to 60°C (140°F)

Declared noise emissions in accordance with ISO 9296:

	Normal Mode
Sound Power, L_{wAd} : (1B = 10dB)	6.3 B
Sound Pressure, L_{pAm} : (bystander positions)	50 dB

Regulatory Notices

FCC Statement (USA)

The United States Federal Communications Commission (in 47 CFR 15.105) has specified that the following notice be brought to the attention of users of this product.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interferences by one or more of the following measures:

- reorient or relocate the receiving antenna
- increase the separation between the equipment and the receiver
- connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- consult the dealer or an experienced radio/TV technician for help

Use of a shielded cable is required to comply within Class B limits of Part 15 of FCC Rules.

Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by Hewlett-Packard Company may cause harmful interference and void the FCC authorization to operate this equipment.

LED Indicator Statement

The display LEDs meet the requirements of EN 60825-1.

Power Adapter Statement

The power adapter cannot be repaired. If it is defective it should be discarded or returned to the supplier.

VCCI (Japan) Class 2 Product

この機器は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に適合する第二種情報装置です。この機器は、家庭環境で使用することを目的としているため、この機器がラジオやテレビジョン受信機に近接して使用される場合、電波障害を引き起こすことがあります。
電波障害に備えて正しい取扱いをして下さい。

RRL (Korean) Class B Product

사용자 안내문

기종별	사용자 안내문
A급 기기	이 기기는 업무용으로 전자파 장해검정을 받은 기기이거나 판매자 또는 사용자는 이 점을 주의하시기 바라며, 만약 잘못 구입하셨을 때에는 구입한 곳에서 비업무용으로 교환하시기 바랍니다.
B급 기기	이 기기는 비업무용으로 전자파장해검정을 받은 기기로서 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

비고 A급: 업무용 기기를 말한다.
B급: 업무용 기기 외의 기기를 말한다.

Available Supplies and Accessories

Supply/Accessories	HP Reorder Number
HP IEEE-1284 Compliant Parallel Interface Cable (with one 1284-A connector for the computer port and one 1284-B connector for the printer port)	
2 meter length	C2950A
3 meter length	C2951A
HP Centronics Parallel Interface Cable	C2912B or HP24542D
Print Cartridge	
Black Print Cartridge	51629A or 29A
Color Print Cartridge	51649A or 49A
Media	
HP Premium Transparency Film (U.S. letter, 50 sheets)	C3834A
HP Premium Transparency Film (U.S. letter, 20 sheets)	C3828A
HP Premium Transparency Film (European A4, 50 sheets)	C3835A
HP Premium Transparency Film (European A4, 20 sheets)	C3832A
HP Premium Glossy Paper (U.S. Letter, 50 sheets)	C3836A
HP Premium Glossy Paper (U.S. Letter, 10 sheets)	C3833A
HP Premium Glossy Paper (European A4, 50 sheets)	C3837A
HP Premium Glossy Paper (European A4, 10 sheets)	C3831A
HP Premium InkJet Paper (U.S. Letter, 200 sheets)	51634Y
HP Premium InkJet Paper (European A4, 200 sheets)	51634Z
HP Greeting Card Paper (20 sheets, 20 envelopes)	C1812A
HP Photo Paper (U.S. Letter, 20 sheets)	C1846A
HP Photo Paper (European A4, 20 sheets)	C1847A
HP Bright White InkJet Paper (U.S. Letter, 500 sheets)	C1824A
HP Bright White InkJet Paper (European A4, 500 sheets)	C1825A
HP PrinterPal Fax Accessory	C2970A

SECTION FIVE

Replaceable Parts

Power Module

U.S.A., Canada 120V/60Hz	9100-5124 (C2175A)
Europe (except U.K.), 230V/50Hz	9100-5132 (C2176A)
Japan, 100V/50/60 Hz	9100-5130 (C2178A)
U.K., 240V/50Hz	9100-5131 (C2177A)
South Africa, 220V/50Hz	9100-5128 (C2180A)
Australia, 240V/50Hz	9100-5127 (C2181A)
China, Argentina, 220V/50Hz	9100-5129 (C2179A)
Korea, 220V/60Hz	9100-5126 (C2182A)

HP DeskJet 670C Series Printer User's Guides

U.S. English User's Guide	C5884-90126
Asian English User's Guide	C5884-90127
International English User's Guide	C5884-90128
Simplified Chinese User's Guide	C5884-90146
French User's Guide	C5884-90134
German User's Guide	C5884-90135
Italian User's Guide	C5884-90139
Spanish User's Guide	C5884-90147
Dutch User's Guide	C5884-90132
Swedish User's Guide	C5884-90148
Norwegian User's Guide	C5884-90142
Danish User's Guide	C5884-90131
Finnish User's Guide	C5884-90133
Portuguese User's Guide	C5884-90144
Hungarian User's Guide	C5884-90138
Polish User's Guide	C5884-90143
Czechoslovakian User's Guide	C5884-90130
Russian User's Guide	C5884-90145
Turkish User's Guide	C5884-90151
Greek User's Guide	C5884-90136
Arabic User's Guide	C5884-90129
Thai User's Guide	C5884-90149
Hebrew User's Guide	C5884-90137
Japanese User's Guide	C5884-90140
Korean User's Guide	C5884-90141
Traditional Chinese User's Guide	C5884-90150
Access Door (Top Cover) Assembly	C5884-60018
Base Foot Assembly (4 ea.)	C2162-60098
Paper Tray Assembly	C5884-60016

Ordering Information

To order printer supplies or accessories, call your nearest HP dealer. If your dealer does not have the supplies, call HP DIRECT at the following numbers for fast shipping service:

U.S.

- **Within the U.S.:** (800) 538-8787
- To order **replaceable parts** within the U.S.: (800) 227-8164
- For information on **HP Service Agreements** within the U.S.: (800) 835-4747 (Monday-Friday: 7:30 am to 12 noon PST and 1:00 pm to 4:00 pm PST)

Canada

- **Canada:** (800) 387-3154, (905) 206-4725,
Fax: (905) 206-3485/3739,
Hewlett-Packard (Canada) Ltd., 5150 Spectrum Way,
Mississauga, Ontario L4W 5G1
- **Toronto:** (416) 671-8383

Latin America

- **Latin America Headquarters:**
(305) 267-4220,
Fax: (305) 267-4247,
5200 Blue Lagoon Drive, Suite 950,
Miami, FL 33126
- **Argentina:**
(54 1) 781-4061/69, Fax: (54 1) 781-4090,
Hewlett-Packard Argentina, Montañeses 2140,
1428 Buenos Aires, Argentina
- **Brazil:**
(5511) 725-1444, Fax: (5511) 725-1244,
Edisa Hewlett-Packard, Alameda Rio Negro, 750 Alphaville,
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DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:

Hewlett-Packard Company

Manufacturer's Address:

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Hewlett-Packard Espanola, S.A.
Barcelona Division
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Barcelona, Spain

declares, that the product(s):

Product Name:

DeskJet Printers

Power Modules

Model Number(s):

C5884A

C2176A & C2177A

Product Options:

All

conforms to the following Product Specifications:

Safety: IEC 950 : 1991 Second Edition +A1 +A2 +A3/EN 60950 : 1992 +A1+A2+A3
EEC 825-1 : 1993/EN 60825-1 : 1994 Class 1 for LEDs

EMC: EN55022 : 1994 Class B/CISPR 22 : 1993 Class B
EN 50082-1 : 1992

IEC 801-2 : 1991 Second Edition/prEN 55024-2 : 1992 : 4 kV CD, 8 kV AD

IEC 801-3 : 1984/prEN 55024-3 : 1991 - 3 V/m

IEC 801-4 : 1988/prEN 55024-4 : 1993 : 0.5 kV Signal Lines, 1 kV Power Lines,

IEC 1000-3-2 : 1995/EN 61000-3-2 : 1995*

IEC 1000-3-3 : 1994/EN 61000-3-3 : 1995

Supplementary Information:

The products herewith comply with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE marking accordingly. The products were tested in a typical configuration.

*Products have less than 75 Watts active input power.

Vancouver, WA, January 7, 1997



Al Grube

Customer Assurance Manager

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department ZQ/ Standards Europe, Herrenberger Straße 130, D-71034 Böblingen FAX:+49-7031-143143

PRINTING FROM DOS

Printing In DOS

This section includes:

- When to use the HP DeskJet Control Panel for DOS
- Commonly asked questions about DOS printer drivers

There are two different ways you can control print settings when you are getting ready to print a document: The HP DeskJet Control Panel for DOS and DOS printer drivers. Both of these are described in the following pages.

HP DeskJet Control Panel for DOS

DOS users have access to many printer features through specific DOS printer drivers; however, many software manufacturers do not develop printer drivers for their software programs. The HP DeskJet 670C Series printers provide their own DOS software control panel for improved printer control when DOS printer drivers are not available or when certain print settings are not available through DOS software programs.

NOTE

The HP DeskJet Control Panel for DOS is not a printer driver. It should be used to set print settings that are not available through DOS software programs. Printer drivers are supplied by the manufacturers of your DOS software programs. If your DOS software program does not include a printer driver for the HP DeskJet 670C Series printers, contact the manufacturer of the software program or use one of the alternate printer drivers listed on page 78.



DOS Printer Drivers

What is a printer driver?

If you use DOS software programs (whether or not they are running within Microsoft Windows), you need a specific printer driver for each DOS program in order to print to your HP DeskJet printer.

Printer drivers allow you to access the printer's features from your software program's print selections or menus. These features include print quality, page orientation, paper type, paper size, and character sets.

How can I get a printer driver?

DOS software manufacturers provide and update printer drivers for their DOS software programs. The best driver to use is the one designed specifically for the HP DeskJet printer model you are using. However, many times you can achieve satisfactory results by using a different HP DeskJet printer driver.

The following table lists commonly used DOS software programs and their recommended printer drivers.

DOS Software Program	Version	Recommended Printer Driver
WordPerfect	5.1, 5.1+, 6.0	HP DeskJet 600, 670C or 850C
Harvard Graphics	3.0	HP DeskJet 540
Lotus 1-2-3	2.x, 3.x, 4.0	HP DeskJet 540
MS Word	5.5, 6.0	HP DeskJet 560C

How do I install DOS printer drivers?

To install DOS printer drivers, follow the instructions supplied by the software manufacturer. After you have installed the printer driver, you will need to set up the driver from within the software program. If you have any questions or concerns about the performance of your printer when using one of these drivers, contact the software manufacturer.

Why doesn't my software program have a printer driver for my HP DeskJet printer?

Most of the software industry is focused on the development of individual software programs that are compatible with Microsoft Windows. Hewlett-Packard uses this common development standard to supply a printer driver for use with all Microsoft

Windows compatible software programs. This is the reason that fewer DOS printer drivers are being developed.

If there is not a DOS printer driver for my HP DeskJet printer, is there another printer driver I can use instead?

Selecting a printer driver for your specific HP DeskJet printer in each DOS software program that you use ensures the best support for your printer. If an HP DeskJet 670C Series printer driver is not available within your software program, HP recommends that you select one of the following drivers.

Printer Driver	Level of Support
HP DeskJet 850C	Color printing
HP DeskJet 670C	Color printing
HP DeskJet 560C	Color printing
HP DeskJet 550C	Color printing
HP DeskJet 600	Color printing
HP DeskJet 540	Color printing
HP DeskJet 500C	Color printing
HP DeskJet 320	Color printing
HP DeskJet 310	Color printing
HP DeskJet 520	Monochrome printing
HP DeskJet 510	Monochrome printing
HP DeskJet 500	Monochrome printing
HP DeskJet PLUS	Monochrome printing
HP DeskJet	Monochrome printing



HP DeskJet Control Panel for DOS

This section includes:

- Installation and use of the HP DeskJet Control Panel for DOS
- Cleaning and aligning print cartridges
- Supported Character sets

Installing the HP DeskJet Control Panel for DOS

To access the printer's features, install the HP DeskJet Control Panel for DOS as described below.

Before you install the DOS control panel:

1. Perform all setup procedures given in the beginning of this User's Guide.
2. Make sure that both the computer and the printer are turned on. If necessary, press the power  button to turn on the printer.

To install the DOS control panel:

1. Insert Installation Disk 3 into your computer's floppy disk drive.
2. At the DOS prompt (C:\>), type your computer's floppy disk drive designator (for example **A:**), then type **INSTALL** and press Enter, as in:

A:\INSTALL

3. Follow the instructions on the screen to install the HP DeskJet Control Panel for DOS.

If you encounter problems with the installation:

If you receive a message that the installation of the control panel was unsuccessful, reinstall the control panel.

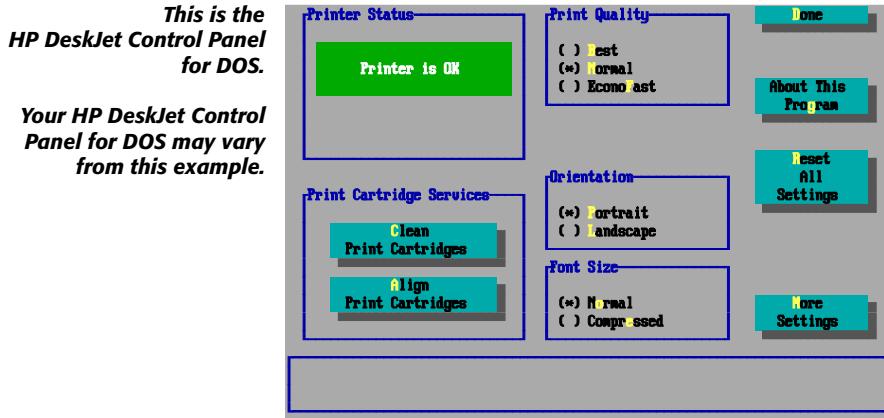
If the installation is again unsuccessful, or if the control panel software is damaged or missing, contact your authorized HP dealer.

Selecting print settings from the DOS control panel

Use the Control Panel to:

- Clean and align the print cartridges
- Select print settings that may not be available from some DOS programs
- Monitor the printer's status at any time

Typically, duplicate print settings that are selected from a DOS software program override print settings selected in the HP DeskJet Control Panel for DOS.



To access the HP DeskJet Control Panel for DOS, type **DJCP** at the DOS (C:\>) prompt.

C:\>**DJCP**

After the HP DeskJet Control Panel for DOS appears, you can activate its selections in one of two ways:

- **With the mouse** — Move the mouse to position the pointer on the desired selection, then click the left mouse button.
- **With the keyboard** — Press the key that corresponds to the highlighted letter in the selection name.

Help in the HP DeskJet Control Panel for DOS

For information on the HP DeskJet Control Panel for DOS, select the **About This Program** button on the HP DeskJet Control Panel for DOS screen.

Also, context sensitive help appears at the bottom of the control panel screen as print selections

Refer to the readme file, README2.TXT, for more information. The README2.TXT file is located in the C:\DESKJET directory.



Cleaning the Print Cartridges

Clean the print cartridges when you notice that lines or dots are missing from your printed text and graphics. From DOS, the print cartridges can be cleaned by using the HP DeskJet Control Panel for DOS, or by using the buttons on the front of the printer.

NOTE

Do not clean the print cartridge unnecessarily, as this wastes ink and shortens the print cartridge life.

From the HP DeskJet Control Panel for DOS:

1. At the DOS prompt, type **DJCP** and press **Enter**. The HP DeskJet Control Panel for DOS appears.
2. Select **Clean Print Cartridge**.
3. Follow the instructions on the screen.

From the printer buttons:

1. With the printer turned on, press and hold down the power  button.
2. While still holding down the power  button, press and release the resume  button seven times.
3. Release the power  button.

Aligning the Print Cartridges

Align the print cartridges when you notice that color ink does not properly line up with black ink. From DOS, the print cartridges can be aligned by using the HP DeskJet Control Panel for DOS.

From the HP DeskJet Control Panel for DOS:

1. At the DOS prompt, type **DJCP** and press **Enter**. The HP DeskJet Control Panel for DOS appears.
2. Select **Align Print Cartridge**.
3. Follow the instructions on the screen.

Supported Character Sets

A character set is a collection of the symbols and characters that constitute all elements of a language or discipline (legal), including punctuation and numbers. The HP DeskJet Control Panel for DOS can be used to select a default character set.

The HP DeskJet 670C Series printers support the following character sets:

United Kingdom (ISO 4), German (ISO 21), French (ISO 69), Italian (ISO 15), Danish/Norwegian (ISO 60), Swedish (ISO 11), Spanish (ISO 17), ANSI ASCII (ISO 6), Legal, PC-8, Roman-8, PC-850, PC-8 Danish/Norwegian, ECMA-94 Latin 1 (ISO 8859/1), PC-852, Latin 2 (ISO 8859/2), Latin 5 (ISO 8859/9), and PC-8 Turkish.

DOS Reference

This section describes:

- Lines of text per page
- Printer commands and control codes

Lines of Text Per Page

Line spacing is the vertical distance between printed lines on the page. The default line spacing for HP DeskJet printers is six printed vertical lines per inch (lpi).

When printing a partial page without sending a form-feed command, the resume  light blinks. Press the resume  button to finish printing. The page ejects automatically.

Number of Lines/Characters in Landscape Orientation

Paper Size	Lines Per Page		Characters Per Line		
	6 lpi	8 lpi	10 cpi	16.67 cpi	20 cpi
U.S. letter	45 (48)	60 (64)	103	172	206
European A4	45 (48)	60 (63)	110	183	220
U.S. legal	45 (48)	60 (64)	133	222	266

Printer Commands and Control Codes

You can use printer commands and control codes to control the selection of character sets and other aspects of your printer. Refer to your software program manual for specific information on how to send commands to your printer. Listings of the printer commands, control codes, and character sets are also available from HP First Fax. Refer to *Customer Support* in *Section 4* for information on contacting HP First Fax.



Internal Printer Fonts

Internal fonts are bitmapped or scalable fonts that are stored in the printer.

The following bitmapped internal fonts are supplied for the HP DeskJet 670C Series printers:

<i>Proportionally-Spaced Fonts</i>	<i>Point Sizes</i>
<i>CG Times</i>	5, 6, 7, 8, 10, 12, 14
<i>CG Times Italic</i>	5, 6, 7, 8, 10, 12, 14
<i>Univers</i>	5, 6, 7, 8, 10, 12, 14
<i>Univers Italic</i>	5, 6, 10, 12

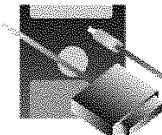
<i>Fixed-Pitch Fonts</i>	<i>Point Sizes</i>	<i>Pitches</i>
<i>Courier</i>	6, 12, 24	5, 10, 16.67, 20
<i>Courier Italic</i>	6, 12, 24	5, 10, 20
<i>Letter Gothic</i>	6, 12, 24	6, 12, 24
<i>Letter Gothic</i>	4.75, 9.5, 19	16.67
<i>Letter Gothic Italic</i>	6, 12, 24	6, 12, 24

The default font is a portrait-oriented Courier 10 pitch, 12 point, upright, medium-weight. It prints if you do not select a font through your DOS software program.

If Problems Occur

When printing from DOS-based software programs, printer errors and status are sometimes reported in the HP DeskJet Control Panel for DOS. If you suspect a problem with the printer, first check the HP DeskJet Control Panel for DOS. If the printer status indicates a problem, find the indicated problem in the troubleshooting tables in the user's guide and try the given solution(s).

If you are unable to solve a problem using these troubleshooting tables in the user's guide, refer to *Customer Support* on page 61 for a listing of resources available to you for the support and maintenance of your printer.



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Hewlett-Packard Limited Warranty Statement

HP Product	Duration of Limited Warranty
Software	90 Days
Print cartridges	90 Days
Printer	1 Year

A. Extent of Limited Warranty

1. Hewlett-Packard (HP) warrants to the end-user customer that HP products will be free from defects in materials and workmanship, for a specified time after the date of purchase by the customer. The duration of this limited warranty is stated above. Certain additional conditions and limitations of HP's warranty are stated in the user's guide. Those conditions and limitations include:
 - a. For software products, the warranty applies only to the media upon which the product is recorded; and
 - b. HP does not warrant the operation of any product to be uninterrupted or error free.
2. HP's limited warranty covers only those defects which arise as a result of normal use of the product, and do not apply to any:
 - a. Improper or inadequate maintenance;
 - b. Software or interfacing not supplied by HP;
 - c. Unauthorized modification or misuse;
 - d. Operation outside the product's environmental specifications, including duty cycle abuse or use of a mechanical switchbox without a designated surge protector;
 - e. Use of non-supported printing media or memory boards; or
 - f. Improper site preparation or maintenance.
3. For HP printer products, the use of a non-HP print cartridge or a refilled print cartridge does not affect either the warranty to the customer or any HP support contract with the customer; print cartridge includes both toner cartridges and ink cartridges. However, if printer failure or damage is attributable to the use of a non-HP or refilled print cartridge, HP will charge its standard time and materials charges to service the printer for the particular failure or damage.
4. If any software media product or print cartridge product proves defective during the applicable warranty period, and if the product is covered by HP's warranty, the customer shall return the product for replacement.
5. If HP receives, during the applicable warranty period, notice of a defect in a hardware product which is covered by HP's warranty, HP shall either repair or replace the product, at its option. Any replacement product may be either new or like-new, provided that it has functionality at least equal to that of the product being replaced.
6. If HP is unable to repair or replace, as applicable, a defective product which is covered by HP's warranty, HP shall, within a reasonable time after being notified of the defect, refund the purchase price for

the product, provided the customer returns the product.

7. HP's warranty is valid in any country where the HP products listed above are distributed by HP, except for the Middle East, Africa, and France's "Departements D'Outre Mer"; for those excepted areas, the warranty is valid only in the country of purchase. Contracts for additional warranty services, such as on-site service, may be available from any authorized HP service facility where the listed HP product is distributed by HP or an authorized importer.
8. This Limited Warranty Statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state in the United States, from province to province in Canada, and from country to country elsewhere in the world.

B. Limitations of Warranty

1. NEITHER HP NOR ANY OF ITS THIRD PARTY SUPPLIERS MAKES ANY OTHER WARRANTY OF ANY KIND, WHETHER EXPRESS OR IMPLIED, WITH RESPECT TO HP PRODUCTS. HP AND ITS THIRD PARTY SUPPLIERS SPECIFICALLY DISCLAIM THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
2. To the extent that this Limited Warranty Statement is inconsistent with the law of the locality where the customer uses the HP product, this Limited Warranty Statement shall be deemed modified to be consistent with such local law. Under such local law, certain limitations of this Limited Warranty Statement may not apply to the customer. For example, some states in the United States, as well as some governments outside the United States (including provinces in Canada), may:
 - a. Preclude the disclaimers and limitations in this Warranty Statement from limiting the statutory rights of a consumer (e.g. Australia and the United Kingdom);
 - b. Otherwise restrict the ability of a manufacturer to make such disclaimers or impose such limitations; or
 - c. Grant the customer additional warranty rights, specify the duration of implied warranties which the manufacturer cannot disclaim, or not allow limitations on how long an implied warranty lasts.
3. To the extent allowed by local law, the remedies provided in this Warranty Statement are the customer's sole and exclusive remedies.

C. Limitations of Liability

1. EXCEPT FOR THE OBLIGATIONS SPECIFICALLY SET FORTH IN THIS WARRANTY STATEMENT, IN NO EVENT SHALL HP BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON CONTRACT, TORT, OR ANY OTHER LEGAL THEORY AND WHETHER ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

